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ABSTRACT

Poor educational performance and the changing nature of work and workers have prompted calls for a major restructuring of American schools. The following broad categories of restructuring options are discussed and supporting research is reviewed: (1) decentralizing authority over schooling through school-based management, more professional teaching conditions, and greater parental choice; (2) holding schools more accountable; (3) altering the process and content of classroom instruction; and (4) strengthening the links between schools and the larger community, particularly with business and various social service networks. The following major problems with restructuring are discussed: (1) the connection between the problems of poor educational performance and a changing economy, and the solutions embodied in different restructuring proposals are not always clear or well-articulated; (2) the causes of the problems with the educational system have yet to be definitively identified; (3) very little attention has been given to the costs of various restructuring options or to the new investments in capacity-building that would be needed; and (4) changes in authority over key educational decisions raise normative questions about the governance of public education and which values should prevail. A list of 102 references is appended. (FMW)

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RESTRUCTURING AMERICAN SCHOOLS: THE PROMISE AND THE PITFALLS

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Conference Paper No. 10

December 1989

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PREFACE

The National Center on Education and Employment is funded by the Office of Educational Research and Improvement (OERI) of the U.S. Department of Education. The Center is based at Teachers College, Columbia University, in New York City. The RAND Corporation of Santa Monica, California, and Washington, D.C., is a partner with Teachers College in this enterprise.

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CONTENTS

ACKNOWLEDGMENTS i

EXECUTIVE SUMMARY ii

INTRODUCTION 1

THE PROBLEM 3
POOR EDUCATIONAL PERFORMANCE 3
THE CHANGING NATURE OF WORK AND WORKERS 5

RESTRUCTURING AS A SOLUTION 8
DECENTRALIZING AUTHORITY OVER SCHOOLING 9
School-Based Management 10
More Professional Teaching Conditions 14
Choice in Public Education 19
HOLDING SCHOOLS MORE ACCOUNTABLE 28
ALTERING THE CONTENT AND PROCESS OF CLASSROOM INSTRUCTION . . 34
Higher Order Thinking Skills 35
Deeper Curricula 35
Sequential Building of Knowledge and Skills 35
Integration of Practical and Academic 35
Elimination of Tracking 38
STRENGTHENING LINKS BETWEEN SCHOOLS AND THE LARGER COMMUNITY 42
James Comer's approach 42
School as a Settlement House 43
Collaboration with Businesses and Other Institutions 43

CONCLUSIONS 48

REFERENCES 52

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EXECUTIVE SUMMARY

School restructuring has recently captured the public imagination. Yet under this single banner of educational reform march the advocates of a variety of distinctive and sometimes inconsistent strategies for improving American public schools. Restructuring has come to assume many meanings, ranging from a greater voice for teachers in school-level decisions to fundamental changes in the way students are assigned to schools and the organization of instruction within those schools. Some proponents even argue that the changes envisioned in notions of restructuring portend a transformation of American public education as great as that of a century ago. Such claims raise a question that all but the most optimistic observers of the U.S. educational scene must ask: Can restructuring significantly improve American schools, or is it just another educational fad, signifying good intentions, but having little hope of fulfillment?

This paper addresses that question by examining four major approaches to restructuring:

- Decentralizing authority over schooling through strategies such as school-based management, more professional teaching conditions, and greater parental choice
- Holding schools more accountable through the use of mechanisms that publicly report on varied aspects of school and student performance, and then act on that information
- Altering the content and process of classroom instruction through a major revision of curriculum content and teaching methods
- Strengthening the links between schools and the larger community through formal alliances with parents, social service and health agencies, businesses, and other institutions

It outlines the assumptions that each of these strategies makes about how to remedy the twin problems of poor educational performance and the changing nature of work and workers. The paper examines the research base from which each strategy is derived to identify the evidence supporting claims that it will actually improve student learning. Finally, it assesses the feasibility of each as workable policy and practice, with special attention to questions of political support, cost, and the new investments in capacity-building that each requires.

The current state of research knowledge is insufficient to establish a causal link—or even an empirical one in some cases—between these strategies and student outcomes. The relationship between a particular strategy and outcomes such as achievement, school completion, and work-related skills is clearest in the case of curriculum reform and least well-documented for the strategy

farthest from the classroom, strengthening links with the larger community. However, many proponents of these strategies have not even specified a logical relationship, showing the progression of changes likely to be associated with a particular restructuring approach. Although reform is typically justified in terms of benefits to students, most restructuring proposals have not framed arguments supporting their adoption in terms of these goals. Rather, the advantages most often cited are teacher empowerment, parental choice, and public credibility. Given such a rationale, defenders of the status quo have countered with the argument that while restructuring represents an opportunity for a major power shift in public education, it has little to do with students.

Three factors lessen the feasibility of implementing restructuring across a wide range of schools. First, each of the major strategies discussed in this paper addresses a different part of the educational system—school organization, teacher quality, curriculum content, parental participation, support services, and so on. Educational problems are multifaceted in their causes and solutions, and some combination of restructuring reforms is needed. However, few efforts are being made to design any type of comprehensive strategy. Worse yet, some restructuring proponents are not even talking with each other on a regular basis. This is particularly true for those advocating change in the organization of schooling and those espousing different curricula and teaching methods. Common to all these restructuring proposals is the dilemma of complementarity—process and content, school and community—coexisting with some very basic contradictions (e.g., external accountability and teacher professionalism, school-based management and stronger links with the larger community). Without serious discussion across the different reform camps, restructuring will remain a disjointed enterprise.

Second, scant attention has been paid to basic finance questions, particularly how much various restructuring reforms will cost and what new investments in individual and organizational capacity need to be made. Those who have examined the potential costs of restructuring have only been able to make very speculative estimates. At one level, data are needed about the amount of additional resources that different types of restructuring will require, especially in the short-term for training and other start-up costs. But information is also needed about the likely effects of restructuring on the distribution of existing resources among schools and districts, and on the mechanisms that states and local districts use to finance public education.

Finally, because restructuring seeks to change who has authority over key educational decisions, it raises profound questions about how public education should be governed and which

values should prevail. For example, is the market model inherent in choice plans consistent with the broader communitarian goals of public education? What mechanisms can be used to reconcile the demands of professional accountability with those of political or democratic accountability? How can curricula meet expert standards of sound subject-matter knowledge, and not violate the norms of diverse local communities? Debate about these issues extends not just across the different groups with a stake in public education, but also within some of those groups. For example, there is no consensus among classroom teachers on how much authority and responsibility they should hold in a restructured system. If restructuring will generate changes as dramatic as its proponents expect, its implications for the democratic control of schools need to be examined carefully.

Restructuring represents a belief that good ideas are out there, that educators and others who care about public schooling have the energy and capacity to implement new approaches, and that the system can be improved. Meeting the challenges inherent in such an immense endeavor requires that the proponents of restructuring now move beyond selling their good ideas, and begin the much more difficult work of policy design and implementation.

INTRODUCTION

Those concerned about American elementary and secondary education have long maintained the optimistic belief that even if the last innovation did not quite live up to its original promise, the next one would. In looking back over the past 30 years, a myriad of novel practices come to mind: the "new math," open classrooms, educational television, and team teaching, just to name a few. Yet most of these innovations were designed to change educational practice only marginally, leaving the basic model of schooling untouched. Despite the ebb and flow of numerous reforms, one teacher continues to teach 25 to 30 students in a self-contained classroom, spending most of her time lecturing to them, while major decisions about resources, curriculum, and educational standards are decided away from either individual schools or classrooms.

Now a different set of ideas, joined under the banner of "school restructuring," is gaining momentum in American public education. Restructuring has come to assume many meanings, ranging from a greater voice for teachers in school-level decisions to fundamental changes in the way students are assigned to schools and the organization of instruction within those schools. Some proponents even argue that the changes envisioned in notions of restructuring portend a transformation of American education as great as what occurred in the late-nineteenth and early-twentieth centuries. Such claims raise a question that all but the most optimistic observers of the U.S. educational scene must ask: Can restructuring significantly improve American schools, or is it just another educational fad, signifying good intentions, but with little hope of fulfillment?

This paper provides an overview of major approaches to restructuring, and addresses two questions:

- What is the evidence to suggest that various restructuring proposals will actually improve student learning?
- How politically, financially, and administratively feasible are these options?

The issue is not whether some American schools can teach students effectively or whether some can nurture innovative practices; there have always been promising experiments and small oases of excellence and creativity in individual schools across the country. The challenge is to implement and then sustain those ideas broadly in schools with different kinds of students, resources, and community preferences. Whether significant and widespread restructuring is possible will depend not only on how well various reform proposals increase student learning, but also on how well they

can be accommodated within the political and financial realities in which public schools must operate.

The first section of this paper outlines the problems that have prompted calls for a major restructuring of American schools. In the second section, four broad categories of restructuring options are presented. They are: decentralizing authority over schooling through school-based management, more professional teaching conditions, and greater parental choice; holding schools more accountable; altering the process and content of classroom instruction; and strengthening the links between schools and the larger community, particularly with business and various social service networks. For each of these options, the research base from which they are derived is examined, and their feasibility as workable policy and practice is assessed. A final section summarizes the political and logistical issues that will need to be resolved before restructuring can fulfill its promise as an educational reform strategy.

THE PROBLEM

The problems plaguing American education have been well-documented over the past decade in scholarly studies and the reports of numerous blue ribbon commissions. Consequently, they are only briefly summarized here to show the motivation behind the current restructuring movement. In a nutshell, these problems are twofold: the poor performance of the educational system and the changing nature of work and workers.

POOR EDUCATIONAL PERFORMANCE

Those concerned about the educational performance of American students typically point to scores on standardized tests that show modest achievement in areas requiring problem-solving skills and the ability to apply knowledge in different contexts; to the low performance of American students as compared with those in other countries; and to a troubling gap between white and minority students and between boys and girls.

A few examples illustrate the basis of these concerns. The National Assessment of Educational Progress (NAEP), which periodically tests a nationally-representative sample of students in several different subjects, found in its most recent assessment that student gains in mathematics achievement since 1978 have been confined primarily to lower-order skills, and that only about half of all 17-year-olds have mastered mathematical procedures such as solving simple linear equations or making decisions on information drawn from graphs (Dossey et al., 1988). Similarly, the NAEP science assessment found that "more than half of the nation's 17-year-olds appear to be inadequately prepared either to perform competently jobs that require technical skills or to benefit substantially from specialized on-the-job training" (Mullis and Jenkins, 1988: 6).

In a 1982 test of the mathematics achievement of eighth and twelfth graders conducted in 18 countries, "U.S. [eighth-grade] students were slightly above the international average in computational arithmetic (calculation) and well below the international average in non-computational arithmetic (e.g., problem-solving)" (McKnight et al., 1987: vi). The results for twelfth graders were no more encouraging, even for the college-bound. For example, the achievement of U.S. students in advanced algebra was below that of all other countries except Thailand. In calculus, the U.S. scored in the lowest quartile, even though in most countries all advanced mathematics students take calculus, while in the United States, only about 20 percent do (McKnight et al., 1987).

Significant achievement gaps persist across different groups of students. The performance of black 17-year-olds in mathematics is about equal to that of white 13-year-olds (Dossey et al., 1988). In the 1986 NAEP assessment, about half the 17-year-old males demonstrated the ability to analyze scientific procedures and data, as compared with only one-third of the females (Mullis and Jenkins, 1988). Such gaps in student outcomes have remained basically unchanged, despite efforts to close them. For example, in examining the effects of new policy initiatives in California on minority students, the Achievement Council found that in spite of a comprehensive set of reforms enacted by the state in 1984, the gap between white and minority students remains essentially unchanged. Furthermore, that gap grows as students progress through school; in the primary grades Latino and black students perform about six months behind white students; by grade 12, they are about three years behind (Haycock and Navarro, 1988). This gap is evident on measures other than just achievement. In California in 1987, 17 percent of Asians and 27 percent of whites dropped out of high school, as compared with 45 percent of Latinos and 48 percent of blacks. Although one-half of all Asian high school graduates and a third of all white graduates meet the eligibility criteria (in terms of course work and class rank) to attend either the University of California or the California State University system, only 13 percent of Latinos and 10 percent of blacks meet these criteria (Haycock and Navarro, 1988).

The image of a poorly-performing educational system extends to more than just students. Much attention has been focused over the past five years on looming teacher shortages and on the quality of those teachers. By some estimates, only about 65 percent of the nationwide demand for new teachers will be met over the next few years. To fulfill that demand completely would require that about 23 percent of each college graduating class go into teaching; in 1985, only 8.7 percent did. Concern is growing not just about the supply of teachers, but also about their quality. New entrants to teaching score significantly lower on basic measures of academic ability than those in other occupations requiring a comparable educational level. For example, most teaching recruits are now drawn from the bottom group of those taking the Scholastic Aptitude Test (SAT), and the few top scorers who are recruited into teaching are more likely to leave the profession after only a few years (Darling-Hammond, 1984).

Although statistical indicators paint a compelling picture of a system operating considerably below standard on a variety of dimensions, poor performance as an impetus for a major restructuring of American education is based on more than just quantitative data. At its core, this problem has been defined viscerally by parents, politicians, business leaders, educators, and members of the general public who believe that past reforms have either not gone far enough, not

lived up to their original promise, or in fixing one problem, have exacerbated others. This dissatisfaction can be seen when a prominent business publication writes: "As a major contributor of tax dollars to public education, corporate America is getting a lousy return on its investment. Not only are schools today not preparing kids for jobs, they aren't even teaching them to read and write" (Perry, 1988). It can be seen in national public opinion polls that show almost half (48 percent) of the respondents grading the public schools in their community with a "C" or lower, and about as many believing that the public schools have gotten worse over the past five years (22 percent), as believing that they have improved (25 percent) (Gallup and Clark, 1987; Gallup and Elam, 1988).

Such discontent can also be seen in a national poll of teachers. On the one hand, two-thirds of them report that student achievement in basic skills has improved since the reforms of the early 1980s, and over half report improvements in programs for special needs students such as the disadvantaged and the gifted. Yet at the same time, almost half the teachers report that their own morale is worse, and that political interference and paperwork have increased (Carnegie Foundation for the Advancement of Teaching, 1988). For those inside the system, then, the diagnosis is somewhat different—marginal improvement for students, but at the expense of teacher morale and the autonomy to exercise their professional judgment. Nevertheless, the basic conclusion is the same: whether it is based on statistical data or personal perception, whether it comes from outside schools or inside, there is a pervasive belief that the educational system is not performing as it ought to be.

THE CHANGING NATURE OF WORK AND WORKERS

Most would agree that the purposes of education are many: greater personal fulfillment; informed, active citizenship; economic self-sufficiency; upward social mobility; a deeper humanity and caring for others, just to name a few. However, over the past decade, concern about the United States' ability to compete economically in world markets has directed much attention to the link between education and employment. As a result, most assessments of the problems currently facing American education include a focus on the changing nature of work and on the size and composition of the future workforce.

Like the problems of educational performance, much has been written about who will be entering the labor force in the near future and the kinds of jobs they will need to perform. A few major points from that literature are summarized here as a way of illustrating another critical

performance standard against which public schools are being measured and found wanting: whether they can effectively teach the skills their students will need in the workplace.

Efforts to project the future skill needs of American industry from currently-available aggregate data have produced somewhat conflicting results, with some showing the mix changing in favor of jobs demanding higher educational attainment (Johnston and Packer, 1987), and other studies finding no proportionate shift away from jobs that now require little formal education (Levin and Rumberger, 1987). However, a consensus seems to have emerged that whatever the actual mix turns out to be, the skills required for all jobs, even ones at the bottom of the occupational ladder, will both increase and be of a different type than that required for similar jobs in the past. This assumption is based on two related factors: 1) the need for the U.S. to maintain high levels of productivity if it is to remain competitive in the world economy and also continue paying relatively high wages, and 2) the demands and opportunities presented by a more technologically sophisticated workplace (Reich, 1983; Murnane, 1988; Dertouzos, Lester, and Solow, 1989).

A variety of data, particularly industry case studies, suggests that three types of skills, not traditionally required of those in lower-level jobs, are increasingly critical (for a more detailed discussion of these skills and their role in different kinds of industries, see Berryman, 1989). The first is a higher level of cognitive skills than those engaged in lower-level production and service work needed in the past. To some extent, this requires that all students be provided with threshold levels of literacy and problem-solving skills which many currently lack (Murnane, 1988). Such an ability also includes knowing how to learn—how to ask relevant questions, to diagnose problems, and to identify information sources (Berryman, 1989). It means, for example, that workers at all levels learn how to respond quickly to errors in a computer-integrated system and to assess their impacts downstream (Rosenfeld, 1988). A related second skill is the ability to be flexible and to perform a variety of tasks. Because of the flexibility inherent in computer software, businesses can now gain a comparative advantage with customized production that requires smaller and more varied runs, and makes them more responsive to shifts in consumer tastes. To achieve needed flexibility, businesses may often reduce the number of different job classifications, and organize production around teams responsible for a particular product, rather than the assembly line of the past with workers performing single tasks (Rosenfeld, 1988). Finally, teamwork-style innovations in the organization of work require social abilities, the capacity to resolve conflicts, and leadership skills among a much broader segment of the workforce.

The evidence on how effectively schools are teaching these skills is limited. The kind of pencil-and-paper tests of literacy and problem-solving skills that are typically used to assess students cannot provide the rich context for problem-solving as it exists in most jobs (Murnane, 1988). However, a 1986 NAEP study of the literacy of young adults (ages 21 to 25) assessed individuals' abilities to handle verbal, graphic, and numerical materials and problems encountered in nonschool settings. It found that while most young adults could perform tasks requiring basic literacy skills such as entering personal background information on a job application (96 percent), only about half (57 percent) could follow directions for traveling from one location to another using a street map and fewer than ten percent could estimate cost using grocery unit-price labels (Kirsch and Jungeblut, 1986). Furthermore, we do know that the most common form of teaching and learning in schools—viz., passive presentation of information and an emphasis on individual work and achievement—is at odds with the active learning and teamwork now being stressed in industry.

At the same time as the nature of work is changing, the composition of the workforce is also undergoing major shifts. Although experts and policymakers disagree about whether a labor shortage is imminent, the size of that shortage, and whether it is short- or long-term (Victor, 1989), they agree that the demographic composition of the future labor force will be radically different from its present makeup. In its widely-read report on *Workforce 2000*, the Hudson Institute projects that between now and the end of the century, only 15 percent of the new entrants to the labor force will be native white males, as compared with 47 percent in that category today (Johnston and Packer, 1987). In other words, the employment pipeline is currently comprised of those individuals—minorities, women, and immigrants—for whom the nation's schools have traditionally done the poorest job of educating.

American business recognizes that the changing nature of work and workers necessitates that it invest more in training and education, and available evidence suggests that it is currently doing that, even to the point of teaching English-language and literacy skills in addition to job-specific ones (Victor, 1989). Despite such investment, however, business leaders, policymakers, and the public are also demanding that schools adapt to the new economic and demographic realities. These demands from powerful political constituencies, coupled with a sense inside and outside of schools that they are not wo[illegible]g as well as they should, have led to calls for a major restructuring of American education.

RESTRUCTURING AS A SOLUTION

In examining the major innovations that have been proposed under the banner of restructuring, one is immediately struck by four features common to all. First, these proposals are not new. School-based management recalls the demands for community control and school decentralization heard in urban school districts in the 1960s; current proposals for making curriculum more effective have their roots in the efforts to improve science and mathematics education in the post-Sputnik era; and calls for greater accountability in public education can be traced back to the competency-testing movement of the early 1970s. Advocates of different restructuring strategies often argue that their particular approach is fundamentally different from earlier reforms because it seeks to change the nature and organization of schooling in more profound ways. Yet school reformers for over a century have made similar arguments, and their modest track record shapes the standard by which contemporary restructuring proposals will be judged.

A second characteristic of these restructuring proposals is that the solution each proposes depends on how its proponents define the root cause of poor educational performance. Some proposals assume that the problem is an organizational one— namely, unresponsive school bureaucracies that cannot adapt to the unique needs of individual schools and students. Others assume that the problem is what is taught or how it is taught. Still others assume that schools have been too isolated from the other societal institutions that help define their mission and can support them in pursuing that mission. These differing diagnoses mean that while some may propose more comprehensive solutions than others, no single approach addresses all aspects of the problem of poor educational performance. At the same time, applying one strategy does not preclude the use of others. So, for example, school-based management or parental choice could conceivably be used in tandem with reforms aimed at changing curricular content or providing health services to students on school campuses. However, as we will see, these different strategies may actually work at cross-purposes with each other, and only a handful of localities are trying to restructure schools in a comprehensive fashion.

Third, despite claims that each represents a plan for profoundly altering schools, these restructuring strategies embody a continuum of change that ranges from the radical to the incremental. For example, greater parental choice could mean publicly-funded vouchers for attendance at private schools, or it could simply mean setting up more magnet schools or allowing parents to send their children to public schools closer to their work. Similarly, school-based

management might mean that teachers and school-level administrators have the authority to determine class size, length of the school day, and who teaches at that school, or it might only mean that they can decide how their staff development budget is spent. This potential for widely varying degrees of change has important implications for the feasibility of these initiatives. On the one hand, it makes at least modest change consistent with reform goals more likely, despite political and financial constraints. On the other, it means that a token version of restructuring can easily be accommodated within the status quo, thus giving the illusion of reform without seriously disturbing the traditional balance of authority within schools. Large, well-established institutions have always had the capacity to absorb new innovations without significantly altering either their goals or organizational structure. "Faced with reform, institutions exhibit remarkable resilience: innovations are first incorporated into existing patterns of behavior and belief, then used to legitimize ongoing patterns of educational conduct, while being identified in slogans [suggesting] reform" (Popkewitz, Tabachnick, and Wehlage, 1982). Certainly, the term restructuring and all that it implies can be used to give the illusion of reform where little may actually exist. Therefore, it is important to consider the conditions under which current restructuring proposals might overcome barriers to more profound change.

Finally, the proponents of school restructuring tend to promote particular strategies in terms of their effects on factors other than student achievement—for example, strengthening parental support and participation, improving teacher morale and retention, and increasing public credibility. In some cases, the links between these input and school process characteristics and student outcomes such as achievement and postschool attainment are well-established by research; in other cases, they are not. Nevertheless, even if the link between a particular reform and student achievement is not the only criterion or even the most important one for judging potential effectiveness, it is a standard that must be considered, if only because the American public and key political elites view it as critical.

The four categories of restructuring options examined below are presented roughly in order of their prominence in the reform dialogue now occurring in school districts, statehouses, corporate boardrooms, and within various interest groups and research institutions.

DECENTRALIZING AUTHORITY OVER SCHOOLING

One of the most common critiques of public schools is that they are overly bureaucratic and centralized. Critics argue that decisions about resource allocation, curriculum, and student assignment are made too far from the classroom, and that those in closest contact with students are

unduly constrained by standardized rules and procedures. School-based management (SBM), more professional teaching conditions, and family choice have been proposed as mechanisms for devolving decision-making authority to the school-site and to individual parents and students. These strategies assume that the system's poor performance is largely due to the way public education is currently organized, and that when the structure of local districts and schools is altered, they will become more flexible and responsive to the unique needs of their clientele, and thus more productive.

School-Based Management

SBM may take many forms, but its most fundamental characteristic is increased authority at the level of individual schools (Clune and White, 1988; Guthrie, 1986; Keene, 1980). This decentralization typically means that school-site staff have greater control over decisions affecting budget, personnel, and curriculum. However, the extent of that control can vary widely. Some schools with SBM may only have decision-making prerogatives in one of the three areas; others may have limited authority (e.g., control over the school materials budget, but not the larger personnel budget) in all three areas; while still others may have considerable authority in every area. In some cases, SBM also means a greater decision-making role for classroom teachers and parents, while in others, the authority is vested almost entirely in the principal.

Where schools have extensive control over their own budgets, they are given a sum based on the number and type of students enrolled in each school. The funding for teacher salaries is allocated on the basis of instructional units (e.g., one for each 25 students), with each equal to the district's average teacher salary. A school then has some flexibility in how it allocates those units. For example, it might decide that by increasing average class size, it can hire additional teacher aides, a reading specialist, or a librarian. In districts with teacher collective bargaining, however, a school is constrained by any contractual class size limits.

If a school has control over personnel decisions, the principal (perhaps in consultation with faculty) decides whom to hire. The district personnel office may recruit teachers and do the initial screening, but individual principals can select who teaches at their schools. As with school-site budgeting, however, their actions are governed by the collective bargaining contract which typically regulates teacher assignment and transfer criteria, and by state law that specifies teacher certification requirements. Where schools have control over curriculum, they are able to select textbooks and decide about course sequencing and instructional grouping.

Depending on the inclination of individual schools, how SBM is structured in a particular district, and the constraints imposed by collective bargaining and state law, SBM can either be a tool for managing the status quo or a vehicle for major restructuring. Up to this time, the most innovative uses of SBM have focused on changing the organization of instruction. For example, in a pilot project now underway in Dade County, Florida, the number and length of class periods at one school have been restructured to reduce class size. At another, the curriculum has been modified to place greater emphasis on language and writing skills in the early grades. In these and other pilot schools, participants have been exempted from some of the district's policies and also from some collective bargaining contract provisions. Similarly, in Hammond, Indiana, one elementary school rearranged the school day to ensure a ninety-minute block of uninterrupted time for reading activities, and a high school mathematics department is considering ways to reorganize class periods so teachers and students are not always working within the confines of a 50-minute period (Casner-Lotto, 1988).

SBM is predicated on the assumption that the closer a decision is made to the students affected by it, the better the decision will be (Clune and White, 1988). This assumption has its roots in several bodies of educational research. However, its prominence in recent educational policy debates is probably best explained by the current reformist rhetoric within U.S. corporations. The argument is that just as American industry has had to reorganize and find alternatives to complex, centralized management structures, so must education. David Kearns, the CEO of Xerox, suggests that schools are still locked into hierarchical models that industry long ago abandoned, and proposes an alternative vision of school management:

> Schools today ought to look like the smartest high-tech companies look, with lean structures and flat organizations. Today's smart companies push decision making down into the organization. Professionals and managers are trusted with the authority to get their jobs done, and they're held accountable for their performance. I think the schools have to be structured that way, too (1988: 567).

Just as the impetus for major school reforms of the early twentieth century was premised on a belief that schools should closely mirror the corporate culture of that era (Tyack, 1974; Katz, 1987), the assumption today is that as American industry changes, so should the schools which train its future workforce.

Two bodies of research literature support the SBM concept. The first is based on studies of educational change. This literature, beginning with Sarason's (1971) essay on the culture of the

school, argues that any attempt to introduce change into a school must confront existing "programmatic and behavioral regularities" that shape the way a school conducts its activities. Consequently, any change introduced from outside must bring with it an alternative set of regularities that can replace or complement the existing ones. Unless innovations take into consideration the culture of individual schools, organizational arrangements and textbooks may change, but basic assumptions and educational practice will remain fundamentally the same. Subsequent research on the implementation of innovative programs found that successful implementation requires a process of "mutual adaptation," whereby the local site adapts innovations, promoted by higher levels of government, in order to meet its own needs, norms, and practices (Berman and McLaughlin, 1975, 1978; Fullan, 1982). This process of mutual adaptation, coupled with the unique culture of individual schools, suggests that federal, state, and district-level policymakers should not only tolerate significant variability in how new policies are implemented in local schools, but also use variability as a way to influence practice. "Where variability represents adaptation of a reform initiative to the particulars of a classroom or site, it captures the invention, the environmental sensitivity, and the judgment that characterizes best practice. As such, it represents a net gain in the policy system's expertise and flexibility" (Elmore and McLaughlin, 1988). Another proponent of greater autonomy for individual schools makes a related argument:

> I believe that to invoke ... the principle of "every tub on its own bottom," or nearly on its own bottom, would go a long way toward developing schools that took care of their own business, rectified chronic problems, and communicated effectively with parents...The guiding principle being put forward here is that the school must become largely self-directing. The people connected with it must develop a capacity for effecting renewal and establish mechanisms for doing this. Then if drug use emerges as a problem, these mechanisms of self-renewal can be used to attack it. If children's reading attainment appears to be declining, improved reading will become a top priority item on the school renewal agenda. This approach to change differs markedly from starting out by bringing in innovations from outside the school (Goodlad, 1984: 276).

School-based management, then, accepts the premise that schools have different cultures, needs, and definitions of good practice. Rather than attempting to make schools more uniform, SBM proponents argue that state and local officials should capitalize on these differences by allowing each school to decide how to organize itself, and to adapt outside policies to its own particular problems.

The second set of studies, known as the effective schools research, is the only intellectual precursor of school-based management that suggests a direct link between school organization and student achievement. The methodological shortcomings of this research are well-documented:

student achievement is typically limited to standardized tests that measure only basic skills; most studies focus on elementary schools; most concentrate on schools enrolling low-income students; and even within this group of schools, most are based on small and unrepresentative samples (for reviews of this research see: Murnane, 1981; Purkey and Smith, 1983; Cohen, 1983).

Despite these limitations, however, critical reviews of this literature have suggested that "the leadership and staff of a school need considerable autonomy in determining the exact means by which they address the problem of increasing academic performance" (Purkey and Smith, 1983). Although the exact link between principals' actions and student learning is not yet well established, there is also a broad consensus that schools in which students perform above the levels predicted by their socioeconomic background are characterized by strong principal leadership (Cohen, 1983). Evidence suggests that effective principals take more responsibility for instruction than less effective ones, and that they buffer teachers from disruptions which interrupt classroom teaching (Bossert et al., 1982). Other factors found to be related to more effective learning across a variety of studies using different research methods include: agreement among the principal, teachers, and parents about the school's instructional goals; an orderly school environment conducive to student learning; high teacher expectations that students can perform regardless of their backgrounds; classroom management techniques that engage students' attention and minimize time lost to disruptions; and the use of active, direct instructional approaches.

The inference now drawn from these studies is that school-based management is an effective way to create those conditions most often associated with effective schools. The assumption is not that SBM will directly lead to higher student test scores, but that where it works effectively, schools will be more likely to create the facilitating conditions—shared values, strong instructional leadership, and an environment conducive to learning.

Even assuming that under the right conditions SBM can produce the expected educational effects, two feasibility issues need to be considered. The first is that, by definition, SBM promotes variation among schools. To the extent that such variation is a response to differing school needs, it is an advantage. However, to the extent that it reflects differing levels of either capacity or commitment, it represents a potential problem. In the past, increased top-down management has been at least partially a response to concerns about inequities across schools in resource allocation, practitioner expertise, course offerings, or instructional practices. Because some of those centralizing policies were not successfully implemented in all schools or resulted in unproductive rigidities, SBM is now suggested as the antidote. Yet the potential for inequity remains, unless

SBM arrangements include mechanisms for building capacity and commitment where they do not currently exist. Some schools simply lack the ability to "sit on their own bottoms."

This need for prior capacity raises a second feasibility issue related to cost. In theory, SBM and school-based budgeting should cost no more than whatever school districts pay under a more centralized system. In fact, if SBM operates as envisioned, it should be more cost-efficient because funds will be used to purchase the personnel and materials schools really need, as opposed to what the central district office chooses to send them. In addition, SBM could result in limited reductions in administrative overhead if functions traditionally performed by more expensive central office personnel are devolved to the school-site to be performed either more efficiently or by lower-cost personnel.

The additional costs, then, are not operational ones, but rather start-up costs. If SBM is to work as intended, districts have to ensure that all schools have the expertise to make budgetary, personnel, and curriculum decisions. No systematic data have been collected on the actual costs of adequately planning and training for SBM, and the amounts allocated for such preparation vary. For example, Dade County has allotted $6,250 to each school planning participation in its SBM pilot project, but school staff report having to meet on their own time to develop and refine their proposals (AFT Center for Restructuring, 1988). The state of Washington is providing an average of $50,000 annually over a six-year period for the 21 schools selected for its restructuring project. Participating schools are required to employ all teachers and other staff involved in the project for an additional ten days a year, and have used the opportunity for quite specific activities such as restructuring the school day and integrating new technologies into the curriculum (Gardner, nd). Other districts such as Hammond have sought outside funding from state agencies and foundations to support training in communications, group dynamics, and leadership skills (Casner-Lotto, 1988).

More information is needed about the costs of implementing an SBM program in different types of schools. For some, a limited amount of initial training and planning time is all that will be needed. For others, however, the lack of school-level expertise, commitment, or time will mean that districts will have to be prepared to provide assistance over a much longer period if SBM is not to exacerbate existing inequities or create new ones.

More Professional Teaching Conditions

A variety of scholars and policymakers (see Darling-Hammond, 1984; Carnegie Forum, 1986; Kearns and Doyle, 1988) have argued that the solution to problems of teacher supply and

quality is to make teaching more professional and to change the conditions under which teachers work. They contend that if teachers are granted more control over their work lives, teaching will be more likely to attract and retain capable people, thus improving the quality of public schooling. This argument stresses the benefits of higher entry standards combined with better compensation and working conditions as a means of improving the attractiveness of teaching to the well-educated.

Proposals to strengthen teacher professionalism usually include three components: rigorous entry standards established and implemented by the profession itself; greater teacher collegiality and autonomy within individual schools; and a differentiated staffing structure giving some teachers expanded leadership responsibilities (the most widely discussed of these proposals are those of the Carnegie Forum on Education and the Economy, 1986).

The first element involves the way teachers are trained and licensed, and is beyond the scope of this paper. However, the last two elements are directly related to the notion of a restructured school. Professionalism, in general, assumes that members of an occupation possess a specialized body of knowledge and that, because their work poses complex and nonroutine problems, their behavior in applying that expert knowledge should be regulated by an internal code of ethics and by the voluntary groups representing them (Barber, 1965). Because judgment must be used in applying professional knowledge to individual clients' needs, that knowledge cannot be reduced to rules or prescriptions for practice; thus professionals as a group require autonomy from administrative control in determining tasks and functions (Boreham, 1983). For teachers, such autonomy means the ability to exercise their best judgment about how to instruct students with varied learning styles and at different stages of cognitive and psychological development. It also means that teachers have the right to participate in decisions about how schools and the services they deliver are organized.

At the school-site, professional teaching is basically a form of school-based management with a strong faculty governance component. Decisions over budget, personnel, and curriculum are devolved to the school-level, but not only administrators make those decisions; teachers are equal partners in the process. Some schools have traditionally had this type of governance, at least informally, because principals have solicited teacher input and then taken it seriously in making decisions. Nationally, about a third of the districts with collective bargaining contracts require that each school establish an instructional policy committee with teacher membership, but the scope and authority of those committees vary tre:. .lously (McDonnell and Pascal, 1988).

In a few well-publicized examples, however, several large districts are experimenting with models of teacher decision-making that would significantly increase their authority. The experiment in Dade County, Florida, is probably the furthest along in its implementation. Ninety-six of the district's 263 schools are participating in an effort strongly supported by both the district superintendent and the local teacher union president. Participating schools have been allowed to choose their own management structure, with some deciding to continue to vest final authority with the principal and others opting for teachers sharing in almost all decisions, including the hiring and firing of staff (Olson, 1987). This experiment in shared-governance has resulted in some significant changes in how schools are organized and resources used. Some schools have adopted peer review for teachers, others have eliminated the assistant principal position and used the funds to hire more classroom aides, still others have changed the school schedule to provide longer blocks of instructional time. Other cities are now following Dade's example, and, in a recent example, Los Angeles teachers obtained a contractual provision establishing decision-making councils at each school in the nation's second-largest school district. The provision, won after a nine-day strike, requires that half the members of the councils be teachers, with parents, community members, staff, and administrators occupying the remaining seats. The scope of these councils includes decisions about: staff development, student discipline guidelines, the scheduling of final exams and other school activities, the allocation of some resources such as lottery funds, and the use of school equipment such as the copy machine.

Like several other restructuring proposals, greater autonomy and shared decision-making for teachers are primarily designed to improve the inputs and process of schooling. Proponents assume that more professional teaching conditions will attract more competent people and will improve the morale and efficacy of those already teaching. However, the assumed link to improved student outcomes is an indirect one, and there is no hard evidence that shared governance or teacher autonomy will lead to higher student achievement. In fact, some of the most vocal advocates of more professional teaching conditions admit that while they hope for gains in student performance, it is too early to tell whether experiments such as those in Dade are helping students learn more (Woo, 4/23/89).

Nevertheless, the research literature is suggestive of how the link between teaching conditions and student outcomes may operate. With regard to autonomy, higher knowledge levels and sufficient flexibility in applying that knowledge in the classroom has been found to enhance teachers' sense of self-efficacy, a trait positively correlated with student achievement (Armor et al., 1976; Ashton, Webb, and Dodo, 1982). A recent review of research on teachers and teaching

(Darling-Hammond and Hudson, 1989) found that opportunities for collaboration and teacher participation in decision-making are associated with reduced teacher absenteeism and turnover and with increased teacher commitment. Involvement in decision making may also augment commitment by increasing teachers' sense of ownership of the educational enterprise. The implication here is that with greater autonomy and collaboration, teachers will not only feel better about their jobs, but also teach more effectively, thus leading to greater student learning.

Some of the feasibility issues that teacher autonomy and shared governance raise are similar to those raised by SBM—namely, the need to make certain that organizational variations across schools do not lead to inequities for students, and that sufficient investment is made in building decision-making capacity at the school-level. Two other issues are unique to faculty governance models. The first is the extent to which creating a larger role for teachers in school decision-making is perceived to be at the expense of school administrators. Some school principals have argued that granting greater authority and responsibility to teachers compromises administrators' prerogatives, and one administrators' organization even filed suit against a mentor teacher plan because mentors would spend all their time working either with beginning teachers or tenured ones who were experiencing difficulties. The administrators argued that such a program encroached on their jobs (Rodman, 1987). However, increasing the decision-making role of teachers need not be viewed as a zero-sum condition with teachers gaining at the expense of administrators. For example, in a shared governance plan, adopted in Easton, Pennsylvania, all the major educational groups were involved in designing the plan. Teachers and principals alike backed the notions of joint governance through school planning councils to share decisions on curriculum, promotion criteria, and other student-related policies; involvement of the teachers' and principals' association leadership in meetings of the superintendent's cabinet and school board; and a joint professional senate, with a principal and teacher delegate from each school, to discuss districtwide issues (Gold, 1988). As this example illustrates, altering the balance of authority within schools is not an insurmountable problem, but it does require that all the affected parties be actively involved in the process of designing new governance mechanisms. Even more importantly, it requires that new roles and responsibilities be clearly defined, and that considerable attention be paid to what the functions of school administrators should be under shared governance models. Up to this point, the

appropriate role for principals has been largely ignored in most discussions of how to increase teacher professionalism.[1]

A second feasibility issue is a somewhat unexpected one. Despite advocacy by business and political elites, teacher union leaders, and education researchers, it is not clear that classroom teachers themselves support many of the strategies designed to strengthen teacher professionalism. Although 97 percent of classroom teachers believe that teachers should have the major role in selecting textbooks, less than half believe that teachers should have the major role in peer review (31 percent), the selection of new principals (42 percent), or decisions about school-level budget allocations (39 percent) (Metropolitan Life, 1987). Some of these attitudes may shift over time as the socialization process for teachers changes, and they observe how these innovations actually operate in practice. Nevertheless, a consensus about what aspects of teaching should be changed to create more professional conditions has by no means been achieved within the profession itself.

One reason for teachers' ambivalence about such reforms lies in the history of efforts to improve their working conditions. Data from a national sample of collective bargaining contracts over a 15-year period indicate that the teacher organizations most likely to obtain provisions enhancing teacher professionalism such as meaningful participation in instructional policy decisions were also the ones that obtained such items as maximum class size limits, guaranteed preparation periods, and well-specified reduction-in-force procedures early on (McDonnell and Pascal, 1988). In other words, attaining key bread-and-butter items that regulate basic working conditions is a precondition for securing provisions that enhance teacher professionalism. Given that fewer than one-third of districts with collective bargaining contracts have such items as maximum class size limits, teachers' reluctance to endorse professionalism reforms may stem from a belief that concentrating on participatory reforms may distract them and their leaders from longer-standing efforts to improve basic working conditions. Case study data from several districts experimenting with strategies to enhance teacher professionalism confirm this assumption. Many rank-and-file teachers in those districts reacted with skepticism and even hostility to the reforms, and expressed fear that in pursuing professionalism initiatives, teacher leaders were being less vigilant in their

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[1] One teacher reform proposal that did consider the role of the principal in a restructured school suggested that an alternative model of governance would be schools headed by a committee of lead teachers, one of whose members would act like a managing partner. "In such schools, the teachers might hire the administrators, rather than the other way around. Once the fundamental idea that the primary source of expertise for improving schools lies within them, many ways to organize leadership are possible" (Carnegie Forum on Education and the Economy, 1986: 61).

efforts to gain higher salaries and smaller class sizes (McDonnell and Pascal, 1988). This finding suggests that more professional teaching conditions will not come cheaply. Until rank-and-file teachers have what they consider to be the enabling conditions of professional teaching—reasonable class sizes, availability of materials, sufficient time to teach—they are unlikely to accept wholeheartedly reforms that require new roles and commitment from them.

Choice in Public Education

Until several years ago, most discussions of educational choice centered around the pros and cons of mechanisms such as vouchers and tuition-tax credits that would allow public funding of students enrolled in private educational institutions. This approach is highly controversial, and the ensuing debate focused on sensitive issues such as the separation of church and state, equal educational opportunity, and continued support for public schools. The inability of voucher and tuition-tax credit proponents to advance their agenda politically, coupled with a broader-based interest in making schools more responsive, has led over the past few years to proposals that provide options for greater student and parental choice within the public school system.

This section examines the assumptions underlying current choice proposals, past research relevant to this strategy, and the feasibility factors that need to be considered in designing choice plans. Because of the wide range of issues that choice raises, this section is more extensive than those on other restructuring strategies.

The current emphasis on greater choice within public education was given a tremendous boost by recommendations contained in a report of the National Governors' Association (1986):

> If we implement broader choice plans, true choice among public schools, then we unlock the values of competition in the educational marketplace. Schools that compete for students, teachers, and dollars will, by virtue of their environment, make those changes that allow them to succeed (12).

The report then went on to recommend:

> Expanding opportunities for students by adopting legislation that permits families to select from among kinderg[illegible]o twelfth grade public schools in their state, and permitting juniors and seniors t[illegible]d accredited public postsecondary institutions, with tax funds following the studen[illegible]).

More recently, George Bush has given the notion of greater choice within the public school system added prominence through sponsorship of a White House conference on the topic, espousal of the idea in his first State-of-the-Union speech, and continual highlighting of it as part of his interest in being an "education president."

Three states, Arkansas, Iowa, and Minnesota, recently enacted legislation allowing parents to enroll their children in virtually any public school in the state. Fifteen other states are considering such proposals, and another six are considering less comprehensive options that would typically restrict choices to specific groups of students, such as eleventh and twelfth graders or those considered at-risk of not completing school. Six states already have programs that allow high school students to attend colleges and universities and receive credit towards their high school diploma; in these cases, public funding is used to pay the students' tuition and fees. Four states are considering funding "charter schools," open-enrollment schools that teachers themselves would design (Snider, 1989a). These newer forms of public school choice join older versions such as magnet schools (originally established to promote racial integration) and specialty schools that often impose entrance requirements and concentrate on particular subjects such as the arts or science and mathematics.

Data on the demand for choice in public education are somewhat ambiguous at this point. In a 1986 national poll of parents with children in the public schools, 68 percent said that they wished they had the right to choose which public schools in their community their children could attend. However, only 24 percent said that, given the opportunity, they would choose a different school for their children (Gallup, 1986). Since none of the statewide open enrollment plans are operating yet, there is no information on how many students will actually transfer. However, about 2,800 Minnesota students, out of the over 700,000 enrolled in public schools statewide, requested transfers to a new district for the school year beginning in Fall 1989 (Snider, 1989b). In the 1987 school year, 5,400 students, or about 4 percent of the eligible population, participated in Minnesota's Postsecondary Enrollment Options program (New Jersey State Department of Education, 1988).

Several key assumptions underlie the concept of public school choice. The first set focuses on the response of schools to conditions of choice and competition. It assumes that by creating a regulated market system within public education, schools will become more responsive to parental preferences and student needs. Choice proponents also assume that these market forces will produce greater accountability within public education because parents and students will have the

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option of leaving schools that do not perform at acceptable levels. This is the demand-side of choice (Elmore, 1986).

A reciprocal assumption posits that choice plans should also be designed to affect the supply of schooling. Such provisions would allow educators to configure personnel, curriculum, and the use of instructional time in different ways so as to create clear choices for consumers. This assumption argues, in effect, that choice arrangements must also be linked to school-based management:

> Loosening up choice on the consumer side, through changes in attendance policies, for example, while leaving constraints on the provider side, in the form of limits on staff assignment and content decisions, will result in increasingly diverse client demands being placed on a narrow and rigid structure. Loosening up choice on the producer side, in the form of increased school-level responsibility for staffing and content, while leaving constraints on the consumer side, in the form of centralized attendance policies, results in more school-level control, but not necessarily more responsiveness to consumer demand (Elmore, 1986: 30).

A second set of assumptions focuses on the response of parents and students to a system of choice. It posits that if schools are more responsive to parental preferences, parents will be more satisfied with their children's school, will become more actively involved in its activities, and will take more personal responsibility for their own children's education. Similarly, students are more likely to work hard in school if they are attending one that they and their parents selected.

No empirical tests of these assumptions have yet been made—for example, by systematically comparing open enrollment schools with ones having similar resources but mandatory assignment policies on dimensions such as parental satisfaction and involvement and student effort and performance. In addition, available evidence suggests that there is no direct causal relationship between choice and students' academic performance (Elmore, 1986).

Nevertheless, a number of inferences have been made about the potential effectiveness of choice mechanisms from research comparing public and private schools and from studies assessing alternative public schools such as magnets. The most comprehensive, and controversial, comparison of public and private schools is based on a large national survey of high school sophomores and seniors conducted in 1980 with a follow-up in 1 (High School and Beyond [HSB]).

Catholic schools: Although the size of the effect is still being debated among researchers, there is agreement that after controlling for student composition, students in Catholic schools perform better than those in public schools on standardized tests of reading comprehension, vocabulary, mathematics, and writing, but not on tests of science or civics. Because of the small sample size and heterogeneity of the non-Catholic private schools included in the HSB survey, no inferences can be made about their relative performance (Coleman, Hoffer, and Kilgore, 1982; Coleman and Hoffer, 1987).[2] The HSB data also show that Catholic schools are more effective than public schools in raising the academic achievement of student groups that traditionally perform at lower levels: blacks, Hispanics, those from families with lower levels of parental support, and ones from families of lower socioeconomic status. Approximately 14.4 percent of the public schools students in the sample had dropped out of school between the spring of their sophomore and senior years, as compared with only 3.4 percent of the Catholic school students. Furthermore, half of the Catholic school students who were seniors in 1980 were attending four-year colleges in 1982, as compared with only 28 percent of male public school seniors and 31 percent of the women (Coleman and Hoffer, 1987).

Using the original HSB data and a follow-up survey of teachers and administrators (ATS) in 500 of the original 1,000 schools, researchers have sought explanations for these differences in student outcomes. Their conclusions have formed the major research base supporting proposals for greater choice within the public school system. Using these data, proponents argue that even if deep value conflicts preclude extending public funding to students who choose to attend private schools, permitting choice in attendance policies and greater school-site autonomy will allow public schools to adopt those organizational characteristics and practices that seemingly make private schools more effective.

One school-level feature distinguishing Catholic and public schools that Coleman and Hoffer (1987) identify is the extent of curricular differentiation or tracking. The proportion of Catholic high school students enrolled in an academic or college-preparatory program (as compared with either general or vocational programs) is twice as high as for those attending public schools (72.1 percent vs. 35.7 percent). Furthermore, most of the difference in college attendance rates not

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[2] Although the generalizability of the non-Catholic private school results is limited, the differences between this sector and the public schools are generally consistent with those found between public and Catholic schools.

accounted for by family background is explained by the higher likelihood of Catholic school students being enrolled in an academic program.

A number of other differences between public and private schools were identified in the ATS (Chubb and Moe, 1988). For example, Catholic school principals report greater autonomy than public school principals in setting school personnel, disciplinary, and curricular policies.

Private schools: Parents in the private sector are perceived by administrators to be more supportive of their children's school, more involved, and as having more cooperative relationships with the school. Private school teachers rate their principals higher on various leadership qualities, including the assistance they provide on instructional problems. Private school teachers also feel more involved and efficacious in school-level decisions related to curriculum, student ability grouping, and student discipline policies.[3]

Public magnet schools: Research on public magnet schools has also been used to support arguments in favor of choice and greater school-site autonomy. A 1983 study of 45 magnet schools, representative of the more than 1,100 magnets in operation at that time, found that these schools "produced consistently higher attendance rates, fewer behavioral problems, and lower suspension and dropout rates than comparable non-magnet schools" (Blank, 1984: 271). Researchers reported that both student self-selection and the unique characteristics of the schools and the magnet programs accounted for these findings, but they were unable to determine the separate effects of these factors. However, they did report wide variation in educational quality among the sample of magnets, and concluded that three building-level factors were consistently related to higher-quality education: 1) an innovative, entrepreneurial principal, who exerts strong leadership in motivating staff and students and in developing curriculum; 2) a magnet theme, curriculum, teaching methods,

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[3] These differences are clearly suggestive of the characteristics that help explain the stronger academic performance of private schools. However, they need to be interpreted with caution for several reasons. First, the ATS measures administrator and teacher perceptions, not their actual behavior. Therefore, we have no data on how these perceived differences actually affect the way educational services are delivered to students. Second, the major analysis of these data thus far did not report on the size of the differences within either the public or private sectors, as compared with the differences between the two sectors. However, we do know that significant within-sector differences exist in the student achievement data (Murnane, 1984), and the same may be true for school characteristics--the fact that a school is public or private may be less important than what kind of private school it is. Finally, in their analysis, Chubb and Moe (1988) chose not to control for such factors as the size of either the school or the district, arguing that such variables were endogenous to the school. However, even in cases where schools have considerable autonomy, size may be beyond their control and dependent on higher-level facility policies or locational factors.

and staff capabilities that are highly coherent, resulting in strong program identity; and 3) some degree of "special treatment" (or flexibility) with regard to district rules, conventions, and procedures. The researchers did not find the quality of education in magnet schools to be related to school size, program theme, or method of organization, with the high quality magnets varying on each of those characteristics (Blank, 1984). Between 1972 and 1977, parents in the Alum Rock elementary school district in San Jose, California were given vouchers that allowed them to send their child to any public school in the district. Although there are serious questions about whether this experiment offered sufficiently different alternatives and was therefore a true test of public school choice, an evaluation of the project concluded that "experimenting with parental choice and the nature and size of programs had no apparent effect on students' reading achievement, perceptions of themselves and others, or social skills. Thus, debate over educational alternatives should be based on community interests or public policy rather than the possible effects on student outcomes" (Capell, 1981: x-xi).

Like the research comparing public and private schools, studies assessing existing choice arrangements within the public school system are suggestive of the conditions that could make a more universal system of public school choice work effectively. As such, they identify fruitful avenues for experimentation. However, the link between school organization and student achievement is not well-established in these studies. Furthermore, it is not clear what the direction and strength of self-selection effects would be if all parents and students were allowed to make a choice, or how schools would respond to a more universal choice situation. One could hypothesize, for example, that while competition can motivate schools to be more responsive to parental preferences, many will lack the resources to do so (e.g., in the types of teachers, instructional materials, and class sizes they can afford).

A change as profound as public schools moving away from mandatory student assignment policies also raises a variety of feasibility considerations. The first is the question of political support and opposition. If choice is confined to the public school system, traditional opposition to mechanisms allowing public funds to support students enrolled in private schools is not an issue. However, opposition to public school choice plans does exist. Groups representing the interests of minority students argue that choice programs would discriminate against children of poor parents who are less well-informed about school systems, and that minority students might not be welcome in some schools. A black member of the Los Angeles Board of Education has called choice a "cruel hoax" (Bradley and Snider, 1989).

Several studies of existing magnet programs and other types of choice arrangements suggest some basis for these concerns (Snider, 1988). If choice programs involve competitive admissions, impose ethnic quotas, or even in the most common case, set enrollment limits because of personnel or facility constraints, students may have unequal access to different types of schooling opportunities.[4] Insufficient outreach to inform parents and students about the choices available to them and inadequate transportation can further exacerbate potential inequities and create market failures. Even in a system of near-universal choice such as the one being implemented in Minnesota, equity concerns can arise. In the Minnesota case, local school districts were given the option of participating or not in the program. Only one school district chose not to participate for reasons other than lack of space, but that district is located in one of the most affluent areas of the state and is considered one of the highest quality districts (Snider, 1989b).

Small school districts have also opposed interdistrict choice plans because of their likely adverse impact on them. For example, in several of the smallest districts in Minnesota as many as a quarter of the students have requested transfers to other districts, with such a wholesale exodus having major budgetary implications. Whether state policymakers choose to resolve this problem will depend on how they feel about preserving small districts, as compared with encouraging their consolidation.

Since 1986, the American Federation of Teachers (AFT) has supported the exploration of choice options within the public school system as long as they are consistent with the goals and outcomes established by states and local communities. At its 1989 national convention, the National Education Association (NEA) passed a resolution opposing federally- and state-mandated choice plans, but continued to support local choice programs such as magnet schools. However, its state affiliates have sometimes taken diverse positions. The state affiliate in Iowa supported choice legislation there, while the California Teachers Association has opposed similar legislation (Snider, 1989a).

Like most restructuring options, cost and financing arrangements present feasibility challenges in the design of choice plans. As with SBM, a system of public school choice may impose start-up costs, but its operational costs should be no more than the current system's.

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[4] These constraints on universal public school choice might change the source of unequal educational opportunities from the current one based on where a student resides to ones resulting from enrollment, information, and transportation limits. However, if efforts are made to mitigate these latter constraints, public school choice might produce fewer inequities overall than the current system.

However, the best available evidence indicates that magnets cost from 10 to 12 percent more to operate than traditional schools (Snider, 1987). Some of the specialty schools that have received so much attention in the past few years are considerably more expensive than that. For example, the Illinois Mathematics and Science Academy receives $9,600 a year per student just for instructional expenses (the state pays an additional $8,400 for room and board), and the highly-rated Los Angeles County High School for the Arts must raise almost $1,000 more per student each year than the state currently provides (Woo, 6/20/89). If schools were to differentiate themselves in significant ways, particularly if they reduced their size, at least some would cost more than traditional schools with their efficiencies of scale and uniformity of academic offerings.

In addition to cost issues, financing arrangements must also be considered in the design of choice plans. In the case of the programs either recently enacted or being considered by state governments, state funding follows the student from one school and district to another. Such an arrangement is not a problem in states where the majority of education funding comes from the state. However, where the state is not the major funding source, there are typically wide spending disparities among local districts. In the choice bill now being considered in Massachusetts (where the state pays only about 45 percent of the total cost), $2,000 will be transferred with each student, regardless of the actual costs of educating that student. That amount compares with the more than $4,000 average per pupil expenditure in the state. In states where local communities pay a significant portion of schooling costs, interdistrict transfers raise all kinds of questions about who should be compelled to pay for which students. To some extent, such a plan might redistribute resources from more affluent or property-rich communities to students living in poorer ones. However, the arrangement raises equity and burden concerns that could eventually have serious political ramifications.

Another equity issue arises if states choose not to fund transportation costs for students from low-income families. Since they believe that without this support, poor students will be seriously constrained in their options, sponsors of choice bills in some states have included transportation assistance. However, other states considering such legislation have not included this type of funding.

None of these feasibility issues is insurmountable, but they do suggest that designers of choice plans need to consider carefully the likely consequences of whatever student selection and funding mechanisms they select. The experience of magnets, other types of alternative public

schools, and private schools suggest several design factors likely to increase the chances that greater public school choice will result in positive effects. They are:

- extensive outreach so that all students have an equal opportunity to learn about available choices and then to enroll in the school of their choice
- program participation and selection mechanisms that maximize the number of participating schools and ensure as much open enrollment as space permits
- permission for schools to differentiate themselves in their size, curriculum, and instructional strategies
- resources that ensure equal access (e.g., transportation and staff development)
- continued sensitivity to any resource inequities that may develop as the plan is implemented. For example, if not all students who wish to move from poorer to richer districts can do so, access to academic course offerings and other learning opportunities such as laboratories may become more unequal over time.

In sum, because of the very limited and inferential nature of available data, public school choice should probably not be promoted as a strategy that can improve student achievement directly. That relationship is not clearly established, and arguing as such may raise unrealistic expectations on the part of parents and the general public. Rather, choice can be more credibly proposed as a way to build support for public schooling and to increase parental satisfaction and student engagement. Although the data are meager, choice plans may also be a means for bringing drop-outs back to school and providing education more directly related to students' employment interests (e.g., through community college enrollment). Minnesota, for example, found that in the first year of its Postsecondary Enrollment Options program, 6 percent of the students participating had previously dropped out of public schools.

One final point needs to be raised about choice as a means for restructuring public education. This issue has more to do with how the notion of community is defined in a democratic society than with questions of whether choice will work or how it will work. Choice is predicated on the notion that by creating a quasi-market system in public education, schools will become more responsive and efficient. But this analogy cannot be carried too far because markets do not reflect broader community values in the way we expect of the nation's public schools. Markets are arenas for narrow, self-interested transactions. Certainly schools of choice are likely to be responsive to their own clients—to the students enrolled in a particular school and to their parents. Yet a school's immediate clientele may have very different expectations about curriculum

and student outcomes than the broader community of a city or state. The diffuse goals and competing interests inherent in a system of democratic governance may have made public schools less autonomous and efficient (Chubb and Moe, 1988), but they are also the way we create communities that transcend the narrow interests of single constituencies and socialize students into the pluralistic society in which they must live and work. Perhaps the greatest challenge for a system of universal choice in public education will be to replicate the flexibility and efficiency of markets without sacrificing the broader community's interests, as expressed through democratic politics and electoral accountability.

HOLDING SCHOOLS MORE ACCOUNTABLE

Accountability in public education is an old concept. Inherent in the notion that all governmental activity derives from the consent of the governed is the belief that educators should be held accountable to citizens and their elected representatives for the performance of public schools. What is new, however, is the belief that educational accountability systems can be used to advance school restructuring.

The belief that greater external accountability is a key to reform rests on several assumptions. Although educators should be allowed to use their professional judgments in selecting appropriate instructional strategies, those outside the school should play a major role in defining educational objectives and should have available to them sufficient information to exercise oversight over public education. Proposals for greater accountability assume either that schools have been made insufficiently aware of what was expected of them or that their constituents have lacked adequate information to exercise effective leverage over school performance. The solution, derived from this diagnosis, is to make these expectations clear, allow flexibility in the means to achieve desired ends, and then be prepared to reward and punish schools on their performance.

Accountability mechanisms have traditionally taken a number of different forms in public education. Those typically imposed by higher levels of government include: financial audits of school districts to ensure fiscal probity, evaluation of school personnel through structured observations of their work, accreditation visits to ensure that schools meet minimum resource and management standards, and the public reporting of statistical data on student and school performance. Schools and the communities they serve may also develop their own accountability mechanisms. For example, as part of a site-based planning process, school staff, sometimes in collaboration with parent groups, might specify goals and then conduct informal evaluations to determine the extent to which those goals are being met. At the school-site, a number of informal

mechanisms operate as well. These include parental visits to schools, what students tell parents about their school experiences, and the image the school projects in the community.

One outgrowth of the education reform movement of the 1980s has been a renewed emphasis on accountability through the reporting of statistical indicators. Several aspects of this effort are notable. First, states and school districts have tried to move beyond a reliance on standardized test scores as the sole measure of educational quality. The trend now is to develop and collect data on multiple indicators that describe the level of fiscal resources available to schools, the type of courses offered, the quality of the teaching staff, and a variety of student-related measures such as course-taking patterns, promotion and drop out rates, postsecondary matriculation, and a broad range of achievement (e.g., writing skills, higher order skills, and subject matter competence). About half the states now publicly report indicator data on individual schools and allow for some disaggregation of that data by demographic factors such as gender and ethnicity (OERI State Accountability Study Group, 1988).

Another unique aspect of recent accountability efforts is that state governments are not just reporting data about school performance; they are also using that information to reward, punish, and assist schools. About 25 states have policies triggered by data about low performance that range from the targeting of additional resources and assistance to—in a few states—direct state intervention in the day-to-day operations of chronically low-performing districts. Seven states use their indicator systems to trigger substantial actions or material rewards for high-performing or significantly-improving districts and schools. These include school-based incentive grants and exemptions from state regulations or monitoring requirements. The assumption behind this renewed emphasis on public accountability is the belief that if comparable information is available about how schools use the resources available to them and how well different types of students are learning, policymakers, educators, and the public will use that information to improve schooling.

Accountability became linked with school restructuring when the National Governors' Association (1986) recommended an "old-fashioned horse trade" in which state governments would regulate local districts and schools less, and in exchange, educators would produce better results for students. The governors assumed that because staff at individual schools are more likely than those at higher governmental levels to know how to educate the individual students enrolled in their institutions, they should be granted greater discretion, so long as they produce acceptable results for students. This exchange of greater local autonomy for better performance also assumed that schools

and teachers could be judged on publicly-defined standards that are comparable over time and across schools in the same jurisdiction.

Accountability mechanisms of the type now used by most state governments can be powerful levers for changing the behavior of principals and teachers. Available evidence suggests that educators take the reporting of accountability data very seriously, and alter their teaching to improve student performance on whatever indicators higher governmental levels stress (OERI State Accountability Study Group, 1988). The problem is that even in those states which collect a variety of performance data, only student achievement on standardized tests is typically stressed as important. Even though states are moving towards the development and use of more sophisticated achievement tests, most still focus on basic skills. Consequently, the indicators currently influencing school practice are not only test-driven, but also focused on low-level skills. As a result, even if teachers are not "teaching to the test," the effect in many schools has been a narrowing of the curriculum in ways that are inconsistent with the kind of analytical skills and subject matter knowledge that students will need for future employment. Nevertheless, the very power of indicator systems to change school-level behavior suggests that if the appropriate indicators are used, they could be a potent tool in motivating schools to teach the skills required in the workplace of tomorrow.

For accountability to work as part of a restructuring strategy, either through an indicator system or another type of external assessment, some basic issues first need to be addressed, however. Even without restructuring, accountability has always presented a basic dilemma for public education: How can schools be held accountable to the standards and norms of the larger body politic without constraining school practice in ways that result in less effective learning for students? At one level, the challenge is a technical one. States and local districts need to develop indicator systems that stress not just student test scores, but the entire range of school experience. Rather than just asking which schools scored above the state median or improved over the past year, data should also be collected that can answer questions such as: Are teachers assigned to teach courses for which they are qualified; Are all students receiving a rigorous curriculum; Are most staying in school until graduation; Are they adequately prepared for either employment or postsecondary training? This effort would require that states vastly improve their statistical data systems to include more sophisticated tests of student achievement and a variety of new indicators that are both valid and feasible to collect without unduly burdening individual schools. States also need to ensure that districts and schools are compared fairly, and that adequate consideration is given to their differing resource levels and student composition.

The technical difficulties involved in designing fair and valid accountability systems are significant, and require considerable investment in research and development (for a discussion of the technical issues posed by educational indicator systems, see Shavelson, McDonnell, and Oakes, eds., 1989; OERI State Accountability Study Group, 1988). But these challenges pale in comparison with the philosophical and political issues that accountability in public education raises. Questions of "who should be held accountable to whom for what" have always been thorny, but school restructuring further complicates their resolution.

Each of the restructuring options outlined thus far embodies its own model of accountability. SBM assumes that by decentralizing authority to school-level personnel, they can be held truly accountable for performance because they will have direct control over how resources are used, what is taught, and how it is taught. Unlike the current system where authority and responsibility are often fragmented with state and district officials controlling the allocation of instructional resources and school personnel held responsible for outcomes, SBM would join the two. In the case of SBM, the "horse trade" of greater flexibility for better results should work if external accountability standards are broad enough to accommodate the variation across schools that SBM promotes. However, any indicator that measures more than just minimal performance (e.g., higher order as opposed to basic skills, the rigor of course content as compared with simply enumerating the courses offered and taken by their titles), will influence what schools do, and hence, act as a constraint on SBM. One could imagine, for example, a school that decides to offer a deeper fine arts curriculum and gives up several science courses to gain the instructional time and needed resources. If state or district accountability measures stress science achievement, this particular school would be at a disadvantage.

Choice assumes accountability through a quasi-market mechanism: If students and parents are unhappy with a school's performance, they will exit and enroll in a different one. Public school choice also assumes that systematic data will be available about all schools, so that students and parents can act as informed consumers if they wish. Hence, a uniform set of performance indicators is consistent with minimizing market imperfections in a system of public school choice.

Choice does complicate the question of who should be held accountable, however. Accountability in public education has traditionally assumed that regardless of the organizational structure and relative amount of responsibility assigned to each, all three levels, state, district, and school, should be held accountable for school quality. However, in cases of interdistrict choice

where students can attend any school in a given state, what role do local districts play and to whom are they accountable? As voters, parents hold the state accountable; as consumers choosing a school for their children, they can hold the school responsible. But once their child leaves the district in which they reside and vote, electoral accountability at the district-level is severed. If not many students decide to attend schools outside their district, this disjuncture in electoral accountability will not become a significant problem. Nevertheless, it illustrates the deep political conundrums that choice proponents need to consider.

Teacher professionalism assumes a somewhat different model of accountability. It argues that the profession itself should establish standards not just for entry into teaching, but also for what constitutes good practice. Through peer review and other mechanisms, the profession should then enforce those standards, thus ensuring professional accountability. However, those espousing greater professional control over teaching have not always been clear about the unit of accountability within the profession. Will it be the teachers in a single school, a district, a state, or nationally who collectively enforce professional standards?

Like all forms of accountability in public education, teacher professionalism raises both technical and philosophical questions. The technical questions revolve around the process by which teachers are evaluated. Inherent in the concept of professionalism is peer review. Yet, as noted in a previous section, a high proportion of practicing teachers are currently opposed to formal scrutiny by their colleagues. Nevertheless, the notion continues to gain acceptance, particularly for beginning teachers and those needing assistance in improving their teaching.

Even if peer review becomes widely endorsed, the design of the evaluation instrument remains a problem. Past experience in a variety of states and local districts indicates the trade-offs inherent in designing a teacher evaluation system that is fair and also can generate sufficiently uniform information to meet the due process requirements associated with promotion and compensation decisions. States and local districts have either had to bear high transaction costs using instruments that require numerous classroom observations and an assessment of teacher portfolios, or they have inappropriately used assessment procedures designed for other purposes (McDonnell, 1989). Research on teacher evaluation systems concludes that a single evaluation process cannot simultaneously perform multiple functions such as assessing beginning teachers for tenure decisions, classifying experienced teachers for promotion, and aiding teachers experiencing difficulties in the classroom (Wise et al., 1984). The expert consensus is that, within the existing state of measurement technology, it is possible to develop an assessment of teaching skills that can

determine whether a novice teacher is fit for professional practice (Wise et al., 1987). However, existing instruments for assessing veteran teachers remain extremely problematic in their ability to judge teacher performance reliably and validly. Consequently, true professional accountability for teachers awaits both a consensus among teachers about their collective roles and the development of assessment instruments that are valid and cost-efficient to use.

The philosophical or normative issue that professional accountability raises is a variant on the basic question that any decentralization of public power raises: How much authority should be ceded to the teaching profession to define its own standards and police itself, and how much should be retained by elected officials as part of a system of democratic or popular accountability? Deciding how to balance these two values is not an easy task, but it is one of the thorny issues that must be addressed if current demands for greater decentralization are not to conflict with equally strong ones for increased accountability (for an extended discussion of efforts to balance popular and professional control in teacher policy, see McDonnell, 1989).

If we return to the basic question that should undergird the design of any accountability system—who should be held accountable to whom for what—we see two major issues that need to be resolved before accountability can be used as a tool for any type of school restructuring. The first is to determine the appropriate unit of accountability. In a system where significant authority has devolved to the school-level, how much responsibility should state governments, local districts, schools as collective bodies, and individual teachers and principals each bear for student outcomes?[5] To some extent, educators are always blamed for poor educational performance, but so are school boards who cannot get school bond measures enacted by their communities and state officials who support increased funding for public schools and then face voters' displeasure when they feel that they have not received their money's worth. School restructuring demands that this division of responsibility among governmental levels, institutions, and individuals be made more explicit and less a whim of current rhetoric. The second issue revolves around the question of "to whom" are schools accountable. One can think of educational accountability in a decentralized system as a series of concentric circles with parents and students as the innermost circle and the American public broadly defined as the outermost circle. In between, are the different constituencies (e.g., employers, state and local voters, ethnic groups, higher education institutions, etc.) that comprise the

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[5] Clearly, students and their parents also bear some responsibility for how much they learn, and policies such as parental choice and competency tests for high school graduation make the assumption of shared responsibility explicit.

larger body politic having a stake in public schooling. The challenge becomes deciding how much and what kind of accountability individual schools and public education more generally owe each "circle." Those advocating decentralization of authority to the school-level assume that the greatest accountability is owed to the innermost circle of students and parents. Most would likely agree that such an emphasis is appropriate. Yet the question remains of just how much latitude should be left to school-level communities to define and then monitor educational outcomes, given broader concerns about democratic values, labor markets larger than the local community, and equal access to learning opportunities across different schools. The "horse trade" is a viable model for accountability in a restructured school system, but it will not be an easy one to achieve, either technically or politically.

ALTERING THE CONTENT AND PROCESS OF CLASSROOM INSTRUCTION

This reform focuses on curriculum—what is taught in American schools and how it is taught. Calls for a major restructuring of the elementary and secondary curriculum are stronger today than they have been at any time since the post-Sputnik era some 30 years ago. These proposals assume that much of the problem of poor educational performance can be attributed to curricula which do not convey the skills and knowledge that students need today. Just as other approaches to restructuring raise serious questions about who has the authority to decide the goals and process of education, curriculum reform raises questions about which educational goals should prevail. Like other reform proposals, recommendations for major curriculum change force policymakers and educators to confront not just research evidence about which strategies most effectively increase student learning, but also political questions about the mission of public schooling.

Within the last year, professional groups in a variety of disciplines have issued plans for a major overhaul of their curricula. Perhaps the most ambitious is the *Project 2061* report of the American Association for the Advancement of Science (1989). This multi-volume effort outlines the knowledge and skills that students should acquire in all branches of science—the biological and health sciences, mathematics, physical and information sciences and engineering, social and behavioral sciences, and technology—throughout the 12 years of elementary and secondary schooling. The project envisions two more phases in which new curricula, textbooks, and student schedules are first developed, and then adapted and implemented in local schools. Although this effort is the most comprehensive, smaller-scale activities are also occurring in English and history (Rothman, 1989).

Higher Order Thinking Skills

Most recent proposals for restructuring curriculum have four elements in common. First, they focus on what have come to be called higher order thinking skills that include, but are not limited to, the ability to: think critically and analytically, impose a logical structure on seemingly unrelated facts, develop convincing arguments, and engage in creative problem-solving. As a result, the emphasis is on broad, generalizable concepts such as systems, change, conflict and competition, and trade-offs in the social and behavioral sciences (Appley and Maher, 1989).

Deeper Curricula

Second, these proposals recommend moving to a deeper curriculum, and away from the current practice of covering a broad array of topics rather superficially. For example, *Project 2061* envisions students focusing on only a dozen or so substantial topics from kindergarten through twelfth grade, but exploring them comprehensively and from many different perspectives.

Sequential Building of Knowledge and Skills

A third feature shared by these plans is that they move away from the notion of stand-alone courses that lack a sequential building of knowledge and skills over several years (Raizen, 1988). For example, American schools are currently characterized by very little science instruction in the elementary grades (an average of less then 30 minutes a week), and stand-alone secondary courses in the physical and life sciences, with virtually no effort to link them. The curricula now being proposed introduce topics in early grades (often through "hands-on" inquiry), and then return to those topics in progressively more rigorous ways throughout a student's school career. An example is atmosphere and weather. In the early grades, the topic might be covered through student measurement of rainfall and the collection of snowflakes; in later grades, the probabilities involved in predicting weather and the economic and social impacts of climate would be addressed (Hilts, 1989).

Integration of Practical and Academic

A final characteristic of recent proposals is an emphasis on integrating the practical and the academic. This focus is evident in admonitions that academic learning should be experimental and inquiry-based, and that practical or vocational training not be divorced from conceptual learning. The AASA panel on technology education described the link between the academic and the applied in this way: "Generating concepts in the mind should start very early in the learning process, and they should be related where possible to familiar experiences. Experience is the application of understanding. It builds familiarity and helps fix what has been learned so that it can be applied in

future, perhaps unfamiliar situations" (Johnson, 1989: 9). The panel gives the example of teaching students about the advent of modern telecommunications and its impact on society through a traditional lecture/text format, and then complementing that strategy by having students design and build a simple telegraph system.[6]

In essence, these curriculum reform proposals call for a more coherent and analytical approach to the teaching of subject-matter content. Despite what appear to be common themes among most reform proposals, there is not a complete consensus, however. Another group of reformers, typified by the cultural literacy approach of E.D. Hirsch (1987), argue that reform proposals of the kind discussed above are "skills-heavy and knowledge-light" (Rothman, 1989). They advocate a greater emphasis on factual content in the curriculum. This group believes that there is a common body of knowledge that all students should know as a basis for shared culture and communication, and that it is this material on which students should exercise their cognitive skills. In its purest form, this latter approach to curriculum reform is probably a minority view. However, the distinction between analytical skills and factual knowledge is less a dichotomy than a continuum, with proponents of each approach recognizing that the other is necessary for a student to become truly educated. As Lauren Resnick notes in her review of research on higher order thinking skills: "cognitive research yields repeated demonstrations that specific content area knowledge plays a central role in reasoning, thinking, and learning of all kinds" (1987: 18). Despite their differing emphases, each of these approaches advocates curricula that move beyond an emphasis on basic skills and routine abilities to a richer, more complex understanding of social and natural phenomena.

More than any other restructuring proposal discussed thus far, those aimed at changing the content of classroom instruction are most directly related to the problems of underachievement and the need for new workplace skills. Perhaps the most compelling evidence comes from the Second International Mathematics Study (SIMS). In attempting to explain the poor performance of U.S.

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[6] This focus on linking the academic and the applied was most recently emphasized in the House of Representatives version of legislation reauthorizing federal funding for vocational education. It limits federal funding to local programs which integrate academic and occupational disciplines and which lead to both academic and occupational competence. Programs must also offer coherent sequences of courses that will reinforce the need to achieve competencies in academic and job skills (U.S. House of Representatives, 1989). Currently, many significant barriers work against such an integration, including the resistance of both academic and vocational educators and the lack of effective curricular models. However, the House action does send a strong message that integration of these two approaches to learning is desired by political leaders and their constituents.

students in comparison with those in other industrialized countries, researchers were first able to eliminate what they called "deceptive explanations." For example, they found that although the Japanese school year is longer than in the United States (243 days vs. 180), Japanese students spend less time in mathematics instruction than their American counterparts (101 hours a year vs. 144). Similarly, researchers were able to eliminate differences in class size as an explanation when they found as many countries with smaller class sizes among the higher achieving group as among the lower-achieving one (McKnight et al., 1987). The most striking difference that the SIMS researchers found is that the highest achieving countries organize their curriculum very differently than the United States does. For example, at the lower-secondary level, Japan has a curriculum that emphasizes algebra; France and Belgium have one dominated by geometry and by fractions. U.S. schools, on the other hand, allocate their curriculum more equally across a variety of topics, thus covering them much more superficially. The U.S. mathematics curriculum is characterized by a great deal of repetition and review, with the result that topics are covered with little intensity. This low-intensity curriculum means that individual topics are treated in only a few class periods, and concepts and topics are quite fragmented from one another (McKnight et al., 1987). Those advocating a deeper, more intensive curriculum have used the experience of other countries to argue that curriculum content should be organized in larger, more sequential blocks with considerable time devoted to intensive subject-matter coverage. The expectation is that if students are exposed to fewer topics, but in greater depth and with more coherence, their subject-matter achievement and understanding will increase.

A second body of evidence that has been brought to bear in arguing that curriculum reform can improve student achievement is cognitive science research on the nature of human thinking and the acquisition of thinking and learning skills. In her review of this research, Resnick (1987) notes that its most important conclusion is: "the kind of activities traditionally associated with thinking are not limited to advanced levels of development. Instead, these activities are an intimate part of even elementary levels of reading, mathematics, and other branches of learning—when learning is proceeding well" (8). For that reason, Resnick argues, cognitive research represents a fundamental challenge to educational theories that assume a sequence from lower-level activities not requiring much independent thinking or judgment to higher-level ones:

> Children cannot understand what they read without making inferences and using information that goes beyond what is written in the text. They cannot become good writers without engaging in complex problem-solving-like processes. Basic mathematics will not be effectively learned if children only try to memorize rules for manipulating written numerical symbols. All this implies that "basic" and "higher order" skills cannot be clearly separated (45).

The implication of this finding for curriculum reform is that higher order thinking skills should be taught to all students from the very beginning of their schooling, and that failure to do so may be one reason why they do not achieve at expected levels.

Despite clear evidence that higher order skills are used in a variety of disciplines, in everyday situations, and even by young children prior to beginning their formal education, it is less clear how that set of skills can be taught most effectively. There is evidence that the specific skills (e.g., generating alternative viewpoints, solving logical puzzles) taught in different curricular programs are in fact learned by students. However, there is much less evidence about how an integrated ability to learn, think, and reason can be cultivated. Part of the problem in trying to identify curricular practices that will enhance higher order thinking skills lies in the inability of current testing practices to do more than measure students' factual knowledge and assess the coherence and utility of that knowledge (Resnick, 1987). Although by no means conclusive, research on the correlates of achievement and on the way we acquire thinking skills provides strong support to the notion that restructuring curriculum in the ways currently being proposed will improve student outcomes.

Another aspect of curriculum reform seeks to alter the process (as opposed to the content) of classroom instruction. Some of these proposals focus on how instructional time is used (e.g., seeking to maximize the amount of engaged learning time), or how teachers teach (e.g., decreasing the amount of time teachers spend lecturing and increasing student interaction and group work).

Elimination of Tracking

Perhaps the most far-reaching (and controversial) proposals are those calling for the elimination of instructional grouping practices that track students according to some notion of differing ability levels. In elementary schools, students are typically subdivided into different reading (and sometimes mathematics) groups. In high schools, students are usually assigned to one of three tracks—academic, vocational, or general—each with its own set of courses and expectations for students' later attainment. In most schools, students in the vocational and general tracks are

disproportionately poor and minority (Oakes, 1985). The proponents of tracking, with classroom teachers often among the strongest advocates, argue that it is an effective way to teach students of widely varying ability and learning styles. Those who oppose ability grouping argue that it creates serious inequalities in learning opportunities, and that it hurts rather than aids student achievement.

The research evidence about the relationship between tracking and student achievement is mixed. In a review of research on the effects of stratification in secondary schools, Gamoran and Berends (1987) found that students in academic tracks are more likely to plan on attending college and more likely to actually enroll, even controlling for their plans and achievement prior to tracking. However, in those studies with strict controls for prior achievement, the effect of tracking on student achievement was found to be mixed, with some reporting higher achievement associated with assignment to a college-preparatory or academic track and others reporting no effect. Studies that have identified some differences in achievement associated with ability-grouping found that those benefits accrued to students in the academic track, with essentially no achievement gains for those in lower tracks (Kulik and Kulik, 1982).

The clearest evidence about curriculum stratification relates to the differential learning opportunities that students are provided depending on their track assignment. For example, in the High School and Beyond survey, students who reported being in the academic track took three to five times as many advanced mathematics and science courses as those in general and vocational programs (Gamoran, 1987). Not only are lower track students less likely to take advanced courses, but they are also likely to receive less rigorous and lower quality instruction. For example, those in lower tracks are more likely to receive instruction that fragments concepts instead of treating topics in depth, and that involves rote memory instead of the critical-thinking tasks found in higher tracks. In addition, more experienced teachers and those regarded as more effective are disproportionately assigned to higher tracks (for a review of this research, see Gamoran and Berends, 1987).

Although research evidence about the effects of curricular stratification or tracking on achievement is mixed, its effects on students' learning experience and on their post-high-school attainment are now well-documented across a variety of survey and ethnographic studies. Not only does tracking contribute to unequal learning opportunities in the types and content of courses that students take, but it also means that students in lower tracks receive less of the kind of instruction likely to develop the critical thinking skills they need in their future lives.

The evidence suggesting that altering the content and process of classroom instruction will improve student learning is perhaps stronger for this particular approach to restructuring than for any of the others considered in this paper. At the same time, the feasibility challenges that such a strategy poses are at least as great as for the others.

Curriculum is an area where a very similar attempt at comprehensive reform was tried several decades ago with only modest success. Between 1956 and 1975, the National Science Foundation funded 53 curriculum projects, 43 in mathematics and the natural sciences and 10 in the social sciences. Like the curriculum reforms being recommended now, these projects stressed the learning of fundamental concepts over facts and the use of discovery methods, student inquiry, and multimedia materials to supplement textbooks. The record of these reforms is mixed. By 1976, 60 percent of the nation's school districts reported using at least one of the NSF science programs in grades 7 to 12, and 30 percent of the districts reported using some NSF science materials in the elementary grades (Ravitch, 1983). Studies found that students exposed to this new science curricula performed better than students in traditional courses on measures of general achievement and analytic skills, and that they had more positive attitudes towards science (Shymanksy, Kyle, and Alport, 1983). Even with these signs of positive change, a review of NSF curriculum efforts in science concluded: "In spite of the expenditures of millions of dollars and the involvement of some of the most brilliant minds, the science classroom of today is little different from one of 20 years ago. While there may be new books on the shelves and clever gadgets in the storage cabinets, the day-to-day operation of the class remains largely unchanged. A teacher tells his or her students what is important to learn and so the class progresses" (Welch, 1979).

The mathematics and social studies efforts were considerably less successful. The proportion of school districts using NSF mathematics curricula decreased from 30 percent in the early 1970s to 9 percent by 1976, and only about 25 percent of districts were using social science materials (Ravitch, 1983). The overwhelming majority of teachers in all subject-matter disciplines continues to rely primarily on a single textbook (Raizen, 1988). Despite the NSF efforts, the social studies curriculum in most U.S. schools continues to stress a factual approach to history and government, and makes little reference to broader social science concepts. In explaining why teachers rejected the NSF approach, a spokesperson for the National Council for the Social Studies argued that "it is simply more appropriate to them to continue doing what they have done before—practices consistent with their own values and beliefs and those they perceive, probably

accurately, to be those of their communities. The new materials just don't fit" (as cited in Ravitch, 1983: 263).[7]

These previous attempts to reform curriculum in ways similar to those called for in recent proposals are instructive for current efforts. First, the NSF designers wanted not just to revise curriculum, but to replace the existing one entirely. Not only did this guarantee institutional resistance, but it also required massive teacher retraining (Ravitch, 1983). Curriculum reformers not only underestimated the amount of retraining that would be necessary, but also failed to see that teachers might strongly disagree with an approach that challenged their beliefs about what subject-matter content should be taught, how it should be taught, and how they should manage their classrooms. In the period since the height of NSF's activities, we have learned a lot more about how to implement new educational practices successfully, and how to motivate change within schools (Fullan, 1982). However, even if current reformers are "smarter" about how to encourage local modification of centrally-designed materials and develop a sense of local ownership, curriculum reforms will still largely be imposed by academic experts from outside the school. Furthermore, the type of curriculum reform, now being proposed by national blue ribbon panels and designed by small groups of academics and teachers, may very well be perceived as flying directly in the face of other restructuring proposals that advocate greater autonomy for individual schools and teachers. This tension between expert opinion and teacher preferences applies not just to efforts to change curriculum content, but also to calls for decreased tracking and more heterogenous instructional groupings. Those advocating such changes are largely academic experts and policymakers, and those opposing them are classroom teachers allied with some parents.

A second lesson drawn from the NSF experience revolves around the question of whose curricular goals should prevail. The scientific canons held by university experts led them to espouse one type of curriculum, but that approach had to compete with teacher preferences, with the moral and social values of local communities, and with the demands of the mass textbook market. The fact that the new curriculum was sound by scientific standards or that it was likely to increase student achievement was insufficient to ensure its widespread acceptance and use. Those

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[7] The NSF efforts were further thwarted by a political controversy that erupted over an anthropology course designed for the upper elementary grades, "Man: A Course of Study" (MACOS). Because the course dealt with such volatile subjects as evolution and cultural relativism, criticism of it developed in a number of local communities. As a result, NSF and the course developers were investigated by the General Accounting Office and Congress held hearings on MACOS. Although the course survived, its use fell dramatically, and NSF's curriculum efforts have never again been as extensive as they were in the two decades between 1956 and 1976.

factors had to be weighed against other goals, including a desire to preserve local autonomy against a perceived movement towards a more uniform national curriculum, and to conserve the traditional curriculum that educators believed to be effective.

In sum, the feasibility issues raised by curriculum reform are multiple. While it will require a massive and costly effort, building new capacity in the form of materials development and teacher training may actually be the most straightforward task. The larger challenges lie in convincing teachers and the general public that new approaches are preferable, and in reconciling large-scale, top-down curriculum reform with other reforms that seek to decentralize authority and grant teachers greater autonomy over what and how they teach.

STRENGTHENING LINKS BETWEEN SCHOOLS AND THE LARGER COMMUNITY

This final form of restructuring begins with the assumption that there are real limits on what schools can accomplish on their own. Research has shown that, even in particularly effective schools, family background is the most significant predictor of student achievement. Recent demographic, social, and economic changes in the American family have only reinforced the impact of these other factors on students' likelihood of success in school. Those advocating stronger school links with parents, social service and health agencies, businesses, and the larger community point to the high proportion of children living in poverty (20 percent of all children, 25 percent of those under six years) or in single-parent homes (one-sixth of all children, one-half of black children). They then argue that even the best-run schools with the most engaging curriculum cannot overcome on their own the effects of those conditions and the related problems of child abuse, drug addiction, and juvenile delinquency.

Proposals to link schools with other institutions take a variety of forms, and tend to focus on strategies to assist students most at-risk of not completing high school (e.g, see Committee for Economic Development, 1987; National Governors' Association, 1987; W.T. Grant Foundation, 1988; MDC, 1988).

James Comer's approach

Some of the proposals advocate a form of school-based management coupled with other components such as a strong parents' program and a mental health team. This is the approach that James Comer piloted at two elementary schools in New Haven serving low-income students, and that is now being implemented in 50 other schools around the country. Comer (1988) maintains that a child's home and school experiences affect his or her psychosocial development and that it,

in turn, shapes academic achievement. He goes on to argue that in deemphasizing interpersonal factors and focusing on instruction and curriculum, most current educational reforms are incorrectly assuming that all children arrive at school equally prepared to perform as the school expects. Comer presents an alternative model of educational reform maintaining "that the key to academic achievement is to promote psychological development in students, which encourages bonding to the school. Doing so requires fostering positive interaction between parents and school staff." (1988: 46). To implement this model, the New Haven schools instituted a governance system that includes the principal, elected teachers and parents, a mental health specialist, and a member of the support staff; a parents' program that heavily involves them in school activities; and a mental health team comprised of a psychologist and a social worker or special-education teacher.

School as a Settlement House

A second set of proposals for linking schools with other agencies envisions the school as a "settlement house" or focal point for the delivery of a variety of services including child care and parenting education, job counseling and training, preventive health care, and substance abuse treatment. The assumption here is that because no other agency comes in contact with children and their families as regularly as schools or tracks their progress as systematically, they are in the best position to broker and coordinate these services (Cohen, 1989).

Collaboration with Businesses and Other Institutions

A third model advocates greater collaboration with the business community and with other institutions such as colleges, universities, and various cultural organizations. These alliances are not new, and in fact, a 1987 survey identified 140,800 school partnerships across the country, of which 57 percent were with businesses or business organizations (Cavazos as cited in Ascher, 1988). Partnerships range from modest adopt-a-school programs to considerably more elaborate ones such as the Boston Compact which is a centrally-negotiated contract between the city's public schools and businesses, unions, and institutions of higher education. The agreement calls for the schools to improve attendance, achievement, and high school graduation rates by 5 percent annually in return for more postsecondary educational and employment opportunities for their students (also to increase at a 5 percent annual rate).

A recent report by the MIT Commission on Industrial Productivity suggests a different type of school-business link. It concludes:

> With vocational education of limited effectiveness and few apprenticeships outside the construction trades, there is no systematic path to training for the non-college-bound. This lack of a structured transition from secondary schools to work results in weaker skills than those of European and Japanese workers. In this area American workers and firms are at a serious competitive disadvantage (Dertouzos, Lester, and Solow, 1989: 85).

It then goes on to suggest, based on the experience of West Germany and Japan, that the United States should consider a system where more general, transferable skills (in addition to specialized capabilities) are learned through structured on-the-job training. Even if the U.S. were not to move to a widespread system of apprenticeships as in Germany or extensive firm-based training as in Japan, the Commission recommends that a new education and training balance be struck between schools and industry, with industry assuming greater responsibility for teaching generalized work skills and technological literacy.

On the school side, the rationale for collaboration with business is the opportunity to garner more resources, future employment for graduates, and a broadened political support base for public education. From business' perspective, reasons for participating derive from a combination of enlightened self-interest and a view that human resource development is a collective responsibility (McLaughlin, 1988). In more specific terms, business sees such collaboration as an opportunity to influence the caliber of the future workforce, to enhance their corporate image, to improve the quality of life in the communities in which they operate, and to minimize the alternative expense of providing social welfare benefits to those lacking requisite employment skills.

In contrast to the research bases supporting curricular or even teaching reforms, "there is no solid evidence that different collaborative projects are really having a significant impact on [student] learning" (Gary Natriello as quoted in Cohen, 1989). Although the data from an exemplary program such as James Comer's university-based New Haven project show impressive changes in students' behavior and gains on standardized test scores, the evidence from the vast majority of other collaborative projects is spotty and typically anecdotal.[8] Clearly, it would be very difficult to

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[8] Another project, the Boston Compact, that was heralded as a model for an innovative and productive collaboration between schools and the larger community has not experienced such positive results. Largely because of an economic boom and ensuing labor shortage in Boston, the business community was able to exceed its commitment in providing jobs. The schools increased both attendance and achievement, but the dropout rate among public school students increased from 36 to 46 percent over the past six years (Farrar, 1988). Recent reports suggest that the business community is losing interest in the Compact partly because of the schools' inability to solve the dropout problem (Rothman, 1988). The problems encountered by the Compact have been attributed to the district's inability to provide sufficient assistance because it was concentrating on implementing other policies,

determine what effect programs one step removed from the classroom (e.g., school-based health clinics) have on student learning. But at this point, it is also not possible to tell in any systematic way whether such programs are associated with other desired outcomes such as higher self-esteem for students or a greater willingness and ability to stay in school. In its report on services for at-risk youth, MDC (1988) concluded that "while many interesting-sounding programs exist, little information is available upon which to base judgments of effectiveness" (7).

Even without systematic data about their likely effects, it is possible to identify some of the feasibility issues that school collaboratives face. One major problem stems from the very fact that linking schools with social service agencies involves multiple programs and institutions. In describing the situation in California, Heath and McLaughlin (1988) list these barriers: "the general problems include separate funding streams, inconsistent eligibility criteria, splintered organization of interest groups, and legislative jurisdictions that preserve service fragmentation" (305). In California, 160 different programs serve children and youth; these programs are run by 37 units in 7 separate state-level departments; services are delivered by 20 types of local agencies; and program eligibility is determined by 25 separate categories of information related to financial tests, diagnostic conditions, and specific target populations (Smrekar, 1988). The situation in smaller or less activist states may be less complex, but the traditional fragmentation among educational, social, and health services remains despite a growing emphasis on the need for coordination.

This policy fragmentation is further reinforced at the local delivery level by the different goals and professional socialization of educators and social service professionals. In their study of social services in American high schools, Farrar and Hampel (1987) found a balkanization of social service staff with some guidance counselors dealing only with academic matters and career planning, others focused on students' personal problems, and school nurses and social workers dealing more specifically with issues such as substance abuse and teen parenting. Further confounding this fragmentation is the manner in which students are referred to various services. Farrar and Hampel found that the delivery of social services is exceedingly informal, and usually dependent on individual relations among staff and on their personal knowledge and judgment about what services are available and appropriate. Except for serious situations such as child abuse that are governed by clear legal statutes, there are few formal guidelines dealing with which students should be served by which programs.

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the resistance of school principals to changing their schools to accommodate the Compact, and the Compact's lack of resources for offering training and technical assistance to teachers (Farrar, 1988).

As in all the other restructuring proposals, the extent and strength of school-community links will depend on the values and preferences of those involved. For example, school-based health clinics have become quite controversial in some local communities because they dispense contraceptive information. In these cases, collaboration can become a victim of larger value conflicts. Even when it does not involve basic moral values, some educators see collaboration as diverting the schools from their traditional academic mission and causing them to expend their limited time and staff resources on what are viewed as more peripheral activities. Jerome Harris, the superintendent of the Atlanta public schools, argues that school cooperation with private industry and other agencies should be regarded as supplementary and not as "a solution to any problem" at-risk students face. He maintains that attaching too much importance to such collaboration "in some way removes us as educators from having any kind of real sense of accountability for our lack of success in doing what we're supposed to be doing" (as quoted in Cohen, 1989).

Others who have studied school-business partnerships caution about their limits. Noting that big-city partnerships have done considerable good, Dale Mann (1987) also found that the smaller the district, the less likely they were to have formal partnerships (although some local businesses might be interacting with the schools on an informal basis). Mann concludes that because of the size of most businesses outside large cities and the competition partnerships set up with the need to raise local taxes and support youth activities outside the schools, school-business partnerships are unlikely to be effective in many smaller districts. He also argues that although school-business partnerships can be an important source of assistance to local schools, they should not be viewed as a lever for more comprehensive educational reform. "The structure of school governance purposely isolates schools from any single group, and the business community lacks the unity, expertise, resources, and authority necessary for school reform" (Mann, 1987: 231). In addition, most businesses lack the incentives for sustaining the long haul necessary to changing the schools in any given community. "Relocating plants, deskilling jobs, and purchasing training are far more frequent responses by businesses to the need for school reform than is working on that reform" (Mann, 1987: 232).

In acknowledging the limits on what schools can accomplish for students on their own, efforts to strengthen the links between schools and the larger community may eventually become an important part of the dialogue on restructuring. Currently, however, this strategy is the least well-developed of restructuring plans in terms of a data base to identify which particular approaches are likely to be effective for different types of communities and student needs, and in ways to address

the feasibility issues it raises. Nevertheless, the limited evidence available does suggest several general guidelines to consider in the design of such strategies. The first is the need to think about services for youth, not according to individual programs or pathologies, but in terms of a child's total development. This perspective also requires that youth services be viewed in the broader context in which children live—family, school, and neighborhood (Heath and McLaughlin, 1988). The second is the need for the leadership and resources to implement that altered vision of youth services. Even with the best of intentions, collaboration will not come easily or cheaply. Long-standing political, bureaucratic, and professional barriers need to be overturned. Such an effort requires that all participants recognize that achieving their particular goal for youth—be it academic skills, good health, self-esteem, or economic self-sufficiency—is more likely under a collaborative arrangement than with continuing fragmentation. It then requires that capacity-building resources be available to establish and maintain those working relationships. For schools, the particular challenge is to be actively involved in such collaboration without letting it divert them from their primary educational mission.

CONCLUSIONS

Several months ago, in an appearance on the McNeil-Lehrer *Newshour* in conjunction with the release of a report on the reform of middle schools, Governor Bill Clinton of Arkansas was asked how this particular report related to all the others that had been issued on educational reform over the past few years. In answering the question, Clinton noted that the release of so many reports on educational reform should be interpreted as a sign of hope—that people had not given up on the system. This hopefulness is also the most important characteristic of strategies to restructure American schools. These proposals represent a belief that good ideas are out there, that educators and others who care about public schooling have the energy and capacity to implement new approaches, and that the system can be improved.

The promise of restructuring lies in an array of strategies that have emerged from the natural variation among schools, the experience of other countries, the exemplary practices of particularly creative educators, and a growing number of pilot projects. The challenge in fulfilling that promise is threefold. The first is to determine which of the many reform strategies advocated under the banner of restructuring are most likely to improve student learning. As we have seen, all the major strategies offer hope for improving some aspect of the schooling experience, most are likely to enhance the conditions that contribute to effective student outcomes, but not all are worth an equal investment of time and effort. The second is to move beyond the unique circumstances—different cultures, self-selection and high motivation, above-average organizational capacity—that characterize the models from which restructuring proposals have been drawn. Now the challenge is to implement those strategies on a widespread basis in schools with varying student needs, goals, and resources. The third is to ensure that the promise of restructuring is not diluted by a kind of tokenism that accepts the rhetoric of reform, incorporates into ongoing practice those aspects least threatening to the status quo, but does not alter the traditional balance of authority and responsibility within public education.

As this paper has illustrated, several major pitfalls need to be overcome before these challenges can be resolved successfully. Although none is insurmountable, most have not yet been addressed by educational reformers, and continuing to ignore them is likely to relegate school restructuring to the proverbial graveyard of educational fads.

Four issues are particularly significant. The first is that the links between the problems of poor educational performance and a changing economy and the solutions embodied in different

restructuring proposals are not always clear or well-articulated. Although reform is typically justified in terms of student outcomes such as achievement, school completion, and employment skills, most restructuring proposals have not framed the arguments supporting their adoption in terms of these goals. Rather, the benefits we most often hear about are teacher empowerment, parental choice, and public credibility. Given such a rationale, defenders of the status quo have countered with the argument that while restructuring represents an opportunity for a major power shift in public education, it has little to do with students.

Consequently, it is important to make more explicit the link between the problems of American education—on which there is now a remarkable consensus—and each of these solutions. As we have seen, the current state of research knowledge is insufficient to establish a causal link, or even an empirical one in some cases, between these strategies and student outcomes. However, in all cases, at least a logical one should be specified, showing the progression of changes likely to be associated with a particular restructuring approach. In this way, policymakers and the public have a basis for understanding what they can expect to be purchasing with their money and support, and educators have a clear gauge for implementing and then judging the effectiveness of their restructuring efforts.

The second potential pitfall can best be described as the "blind men and the elephant" syndrome. Although a consensus has emerged on the problems facing American education, analyses of their causes still differ. As a result, each of the major restructuring strategies discussed in this paper addresses different parts of the educational system—school organization, teacher quality, curriculum content, parental participation, support services, and so on. Clearly, educational problems are multifaceted in their causes and solutions, and some combination of restructuring reforms is needed. However, few efforts are being made to design any type of comprehensive strategy. Worse yet, some restructuring proponents are not even talking with each other on a regular basis. This is particularly true for those advocating changes in the organization of schooling and those espousing different curricula and teaching methods. One group is focusing on the schooling process and the other on its content. For reform to be effective, however, these two must be joined. Right now, each is isolated from the other, and no one has even attempted to come to terms with the fundamental dilemma of mutual interdependence on the one hand, and a basic conflict between the decentralizing tendency of one reform and the centralizing direction of the other. This same theme of complementarity and contradiction is equally true for other restructuring proposals (e.g., accountability and teacher professionalism, SBM and stronger links with the larger

community). Each holds one piece of the elephant, and without serious discussion across the different reform camps, restructuring will remain a disjointed enterprise.

A third issue is the scant attention that has been paid to basic feasibility questions, particularly how much various restructuring reforms will cost and what new investments in capacity-building need to be made. Right now, those who have examined the potential costs of restructuring have only been able to make very speculative estimates, and they argue that a more organized way of thinking about cost and resource allocation issues is necessary (McGuire and Augenblick, 1988). At one level, data are needed about the amount of additional resources that different types of restructuring will require, particularly in the short term for training and other start-up costs. But information is also needed about the likely effects of restructuring on the distribution of existing resources among schools and districts, and on the mechanisms that states and local districts use to finance public education.

Although by no means unique to policy discussions of restructuring, the level of investment in staff retraining that each of these proposals requires has been accorded little attention. Proponents acknowledge that you cannot implement a fundamentally different curriculum or ask teachers to assume the roles of peer reviewers or gatekeepers for an array of social services without providing training and the time and opportunity to develop new operating procedures in a collegial manner. But no one has yet made a systematic attempt to determine how much time, effort, and resources such changes would require of different types of schools and local districts. Policymakers and educators need at least a rough balance sheet showing the relative feasibility of different alternatives—that is, the level of new resources required, the extent to which existing resources would need to be reallocated, the type of new staff capacity required, and the expected time-frame for implementing proposed changes.

Finally, because restructuring seeks to change who has authority over key educational decisions, it raises profound, normative questions about how public education should be governed and which values should prevail. For example, is the market mechanism inherent in choice plans consistent with the broader communitarian goals of public education? What mechanisms can be used to reconcile the demands of professional accountability with those of political or democratic accountability? How can curricula meet expert standards of sound subject-matter knowledge, and not violate the norms of diverse local communities? These are the kinds of questions that often are not asked until after policies are implemented and begin to produce their effects, intended and otherwise. However, if restructuring is likely to transform schools as dramatically as its proponents

expect, the implications of those changes for the democratic control of public education need to be articulated before, rather than after, they are implemented.

The promise of restructuring lies in reinvigorated ideas and a new hope for solving the twin problems of poor educational performance and shifting economic demands. Avoiding the pitfalls inherent in such a large-scale endeavor requires that the proponents of restructuring now move beyond just selling their good ideas, and begin the much more difficult work of policy design and implementation.

REFERENCES

AFT Center for Restructuring. (1988). "School-based Management." *Radius, 1* (1).

American Association for the Advancement of Science. *Science for All Americans.* A project 2061 report on literacy goals in science, mathematics, and technology. Washington, DC: Author.

Appley, M.H., & Maher, W.B. (1989). *Social and Behavioral Sciences.* Report of the project 2061 phase I social and behavioral sciences panel. Washington, DC: American Association for the Advancement of Science.

Armor, D., Conroy-Osequera, P., Cox, M., King, N., McDonnell, L., Pascal, A., Pauly, E. & Zellman, G. (1976). *Analysis of the School Preferred Reading Programs in Selected Los Angeles Schools.* Santa Monica, CA: The RAND Corporation.

Ascher, C. (1988, December). *Urban School-community Alliances.* (Trends and issues No. 10). New York: ERIC Clearinghouse on Urban Education.

Ashton, P., Webb, R.B., and Dodo, N. (1982). "A Study of Teachers' Sense of Efficacy." Final report to the National Institute of Education. Gainesville, FL: Foundations of Education, University of Florida.

Barber, B. (1965). "Some Problems in the Sociology of Professions." In K.S. Lynn (Ed.), *The professions in America.* (pp. 15-34). Boston: Houghton Mifflin.

Berman, P., & McLaughlin, M.W. (1975). *Federal Programs Supporting Educational Change.* Vol. IV: *The Findings in Review.* Santa Monica, CA: The RAND Corporation.

_____. (1978). *Federal Programs Supporting Educational Change.* Vol. VIII: *Implementing and Sustaining Innovations.* Santa Monica, CA: The RAND Corporation.

Berryman, S.E. (1989, January). *Education and the Economy: A Diagnostic Review and Implications for the Federal Role.* Paper presented at the Seminar on the Federal Role in Education, The Aspen Institute, Aspen, CO.

Blank, R.K. (1984, December). The Effects of Magnet Schools on the Quality of Education in Urban School Districts. *Phi Delta Kappan,* pp. 270-272.

Boreham, P. (1983). "Indetermination: Professional Knowledge, Organization and Control." *Sociological Review, 32,* 693-718.

Bossert, S.T., Dwyer, D.C., Rowan, B., & Lee, G.V. (1982). "The Instructional Management Role of the Principal." *Educational Administration Quarterly, 18,* 34-64.

Bradley, A., & Snider, W. (1989, June 21). "Backlash Against Choice Plans Emerges Among Minorities." *Education Week.*

Capell, F.J. (1981). *A Study of Alternatives in American Education.* Vol. VI: *Student Outcomes at Alum Rock 1974-1976.* Santa Monica, CA: The RAND Corporation.

Carey, N. (1989). "Instruction." In R.J. Shavelson, L.M. McDonnell, & J. Oakes (Eds.) *Indicators for Monitoring Mathematics Education: A Sourcebook* (pp. 123-146). Santa Monica, CA: The RAND Corporation.

Carnegie Foundation for the Advancement of Teaching. (1988). *Report Card on School Reform: The Teachers Speak.* New York: Author.

Carnegie Forum on Education and the Economy. (1986). *A Nation Prepared: Teachers for the 21st Century.* New York: Author.

Casner-Lotto, J. (1988, January). "Expanding the Teacher's Role: Hammond's School Improvement Process." *Phi Delta Kappan*, pp. 349-353.

Chubb, J.E., & Moe, T.M. (1988). "Politics, Markets, and the Organization of Schools." *American Political Science Review, 82* (4), 1066-1087.

Clune, W.H., & White, P.A. (1988). *School Based Management: Institutional Variation, Implementation, and Issues for Further Research.* Rutgers, NJ: Center for Policy Research in Education.

Cohen, D.L. (1989, March 15). "Joining Forces." *Education Week.*, pp. 7-16.

Cohen, M. (1983). "Instructional, Management, and Social Conditions in Effective Schools." In A. Odden, & L.D. Webb (Eds.). *School Finance and School Improvement: Linkages for the 1980s* (pp. 17-50). Cambridge, MA: Ballinger Publishing Company.

Coleman, J.S., & Hoffer, T. (1987). *Public and Private High Schools.* New York: Basic Books.

Coleman, J.S., Hoffer, T., & Kilgore, S. (1982). *High School Achievement.* New York: Basic Books.

Comer, J.P. (1988, November). "Educating Poor Minority Children." *Scientific American*, pp. 42-48.

Committee for Economic Development. (1987). *Children in Need. Investment Strategies for the Educationally Disadvantaged.* Washington, DC: Author.

Darling-Hammond, L. (1984). *Beyond the Commission Reports. The Coming Crisis in Teaching.* Santa Monica, CA: The RAND Corporation.

Darling-Hammond, L. & Hudson, L. (1989). "Teachers and Teaching." In R.J. Shavelson, L.M. McDonnell, & J. Oakes (Eds.) *Indicators for Monitoring Mathematics Education: A Sourcebook* (pp. 66-95). Santa Monica, CA: The RAND Corporation.

Dertouzos, M.L. Lester, R.K., & Solow, R.M. (1989). *Made in America: Regaining the Productive Edge.* Cambridge, MA: The MIT Press.

Dossey, J.A., Mullis, I.V.S., Lindquist, M.S., & Chambers, D. (1988, June). *The Mathematics Report Card. Are We Measuring Up? Trends and Achievement Based on the 1986 National Assessment* (Report No. 17-M-01). Princeton, NJ: Educational Testing Service.

Elmore, R.F. (1986). *Choice in Public Education.* Santa Monica, CA: The RAND Corporation.

Elmore, R.F., & McLaughlin, M.W. (1988). *Steady Work: Policy, Practice, and the Reform of American Education.* Santa Monica, CA: The RAND Corporation.

Farrar, E. (1988, July). *The Boston Compact: A Teaching Case.* New Brunswick, NJ: Rutgers, State University of New Jersey. Center for Policy Research in Education, Eagleton Institute of Politics.

Farrar, E., & Hampel, R.L. (1987, December). "Social Services in American High Schools." *Phi Delta Kappan*, pp. 297-303.

Fullan, M. (1982). *The Meaning of Education.* New York: Teachers College Press.

Gallup, A.M. (1986, September). The 18th Annual Gallup Poll of the Public's Attitudes Toward the Public Schools. *Phi Delta Kappan*, pp. 43-59.

Gallup, A.M., & Clark, D.L. (1987, September). The 19th Annual Gallup Poll of the Public's Attitudes Toward the Public Schools. *Phi Delta Kappan*, pp. 17-30.

Gallup, A.M., & Elam, S.M. (1988, September). The 20th Annual Gallup Poll of the Public's Attitudes Toward the Public Schools. *Phi Delta Kappan*, pp. 33-46.

Gamoran, A. (1987). "Instructional and Institutional Effects of Ability Grouping." *Sociology of Education, 59*, 185-198.

Gamoran, A., & Berends, M. (1987). "The Effects of Stratification in Secondary Schools: Synthesis of Survey and Ethnographic Research." *Review of Educational Research, 52* (4), 415-435.

Gardner, Booth. (N.D.). *Preparing for Washington's Second Century. School's for the 21st Century.* (Available from the Office of the Governor of the State of Washington.)

Gold, D.L. (1988, June 8). "Pennsylvania District Will Test Shared Governance." *Education Week*, p. 7.

Goodlad, J.I. (1984). *A Place Called School.* New York: McGraw-Hill Book Company.

Guthrie, J.W. (1986, December). "School-based Management: The Next Needed Education Reform." *Phi Delta Kappan*, pp. 305-309.

Haycock, K., & Navarro, M.S. (1988, May). *Unfinished Business: Fulfilling our Children's Promise.* Oakland, CA: The Achievement Council.

Heath, S.B., & McLaughlin, M.W. (1988). "Policies for Children with Multiple Needs." In M.W. Kirst (Ed.), *Conditions of Children in California* (pp. 305-319). Berkeley, CA: Policy Analysis for California Education, University of California, Berkeley.

Hilts, P.J. (1989, February 24). "Science-study Reform Sought. Aim is to Broaden All Students' Skills." *Washington Post*, pp. A1, A6.

Hirsch, E.D., Jr. (1987). *Cultural Literacy: What Every American Needs to Know.* Boston: Houghton Mifflin.

Johnson, J.R. (1989). *Technology*. Report of the Project 2061 Phase I Technology Panel. Washington, DC: American Association for the Advancement of Science.

Johnston, W.B., & Packer, A.H. (1987). *Workforce 2000: Work and Workers for the Twenty-first Century*. Indianapolis, IN: Hudson Institute.

Katz, M.B. (1987). *Reconstructing American Education*. Cambridge, MA: Harvard University Press.

Kearns, D.T. (1988, April). "An Education Recovery Plan for America." *Phi Delta Kappan*, pp. 565-575.

Kearns, D.T., & Doyle, D.P. (1988). *Winning the Brain Race*. San Francisco: ICS Press.

Keene, T.W. (1980). "School-based Management: Missing Link in Accountability?" *Education*, 101, pp. 32-40.

Kirsch, I.S., & Jungeblut, A. (1986). *Literacy: Profiles of America's Young Adults* (Report No. 16-PL-02). Princeton, NJ: National Assessment of Educational Progress, Educational Testing Service.

Kulik, C.L., & Kulik, J.A. (1982). "The Effects of Ability of Grouping on Secondary School Students: A Meta-analysis of Evaluation Findings." *American Educational Research Journal, 19* (3), 415-428.

Levin, H.M., & Rumberger, R.W. (1987). "Educational Requirements for New Technologies: Visions, Possibilities, and Current Realities." *Educational Policy, 1* (3), 333-354.

Mann, D. (1987, November). "Business Involvement and Public School Improvement, Part 2." *Phi Delta Kappan*, pp. 228-232.

McDonnell, L.M., & Pascal, A. (1988). *Teacher Unions and Educational Reform*. Santa Monica, CA: The RAND Corporation.

McDonnell, L.M. (1989). *The Dilemma of Teacher Policy*. Santa Monica, CA: The RAND Corporation.

McGuire, K., & Augenblick, J. (1988, July). *Initial Thoughts on the Costs of Restructuring Schools*. Denver, CO: Educational Commission of the States.

McKnight, C.C., Crosswhite, F.J., Dossey, J.A., Swafford, J.O., Travers, K.J., & Cooney, T.J. (1987, January). *The Underachieving Curriculum: Assessing U.S. School Mathematics from an International Perspective*. Champaign, IL: Stipes Publishing Company.

McLaughlin, M.W. (1988). "Business and the Public Schools. New Patterns of Support." In D.H. Monk & J. Underwood (Eds.), *Micro-level School Finance* (pp. 63-80). Cambridge, MA: Ballinger.

MDC, Inc. (1988). *America's Shame, America's Hope*. Chapel Hill, NC: Author.

The Metropolitan Life Survey of the American Teacher. (1987). New York: Metropolitan Life Insurance Company.

Mullis, I.V.S., & Jenkins, L.B. (1988, September). *The Science Report Card: Elements of Risk and Recovery. Trends and Achievement Based on the 1986 National Assessment* (Report No. 17-S-01). Princeton, NJ: Educational Testing Service.

Murnane, R.J. (1988). "Education and the Productivity of the Work Force: Looking Ahead." In R.E. Litan, R.Z. Lawrence, & C.L. Schultze (Eds.), *American Living Standards* (pp. 215-243). Washington, DC: The Brookings Institution.

_____. (1984). "A Review Essay—Comparisons of Public and Private Schools: Lessons from the Uproar." *The Journal of Human Resources, 19* (2), pp. 263-277.

_____. (1981). "Interpreting the Evidence on School Effectiveness." *Teachers College Record, 83*, 19-35.

National Governors' Association. (1987). *Making America Work. Productive People, Productive Policies.* Washington, DC: Center for Policy Research and Analysis.

_____. (1986). *Time for Results. The Governor's 1991 Report on Education.* Washington, DC: Center for Policy Research and Analysis.

New Jersey State Department of Education. (1988). *Public School Choice: National Trends and Initiatives.* Trenton, NJ: Author.

Oakes, J. (1985). *Keeping Track: How Schools Structure Inequality.* New Haven, CT: Yale University Press.

OERI State Accountability Study Group (1988). *Creating Responsible and Responsive Accountability Systems.* Washington, DC: U.S. Department of Education.

Olson, L. (1987, December 2). "The Sky's the Limit. Dade Ventures Self-governance." *Education Week*, p. 1.

Perry, N.J. (1988, July 4). "The Education Crisis: What Business Can Do." *Fortune*, pp. 71-81.

Popkewitz, T.S., Tabachnick, B.R., & Wehlage, G. (1982). *The Myth of Educational Reform. A Study of School Responses to a Program of Change.* The University of Wisconsin Press.

Purkey, S.C., & Smith, M.S. (1983). "Effective Schools: A Review." *The Elementary School Journal, 83* (4), 427-452.

Raizen, S.A. (1988). *Increasing Educational Productivity Through Improving the Science Curriculum.* New Brunswick, NJ: Center for Policy Research in Education.

Ravitch, D. (1983). *The Troubled Crusade. American Education 1945-1980.* New York: Basic Books, Inc.

Reich, R.B. (1983). *The Next American Frontier.* New York: Times Books.

Resnick, L.B. (1987). *Education and Learning to Think.* Washington, DC: National Academy Press.

Rodman, B. (1987, January 14). "New York Lawsuit Highlights Growing Tension Between Principals, Teachers Over Their Roles." *Education Week*, p. 1.

Rosenfeld, S.A. (1988, June 22). "Educating the Factories of the Future." *Education Week*, p. 48.

Rothman, R. (1989, May 17). "What to Teach: Reform Turns Finally to the Essential Question." *Education Week*, pp. 1, 8, 10.

_____. (1988, November 9). "Businesses Refuse to Sign 'Boston Compact II.'" *Education Week*, (2), p. 5.

Sarason, S.B. (1971). *The Culture of the School and the Problem of Change.* Boston: Allyn and Bacon, Inc.

Shavelson, R.J., McDonnell, L.M., & Oakes, J. (Eds). (1989). *Indicators for Monitoring Mathematics Education: A Sourcebook.* Santa Monica, CA: The RAND Corporation.

Shymansky, J.A., Kyle, W.C., Jr., & Alport, J.M. (1983). "The Effects of New Science Curricula on Student Performance." *Journal of Research in Science Teaching*, 20, (5), 387-404.

Smrekar, C. (1988). "State Policymaking for Children." In M.W. Kirst (Ed.), *Conditions of Children in California* (pp. 323-332). Berkeley, CA: Policy for California Education, University of California, Berkeley.

Snider, W. (1989a, March 15). "In Nation's First Open-enrollment State, the Action Begins." *Education Week*, p. 18.

_____. (1989b, March 15). "Iowa, Arkansas Enact 'Choice'; Proposals Gain in Other States." *Education Week*, p. 1.

_____. (1988, May 18). "School Choice: New, More Efficient 'Sorting Machine'?" *Education Week*, p. 1, 8.

_____. (1987, June 24). "The Call for Choice: Competition in the Educational Marketplace [Special report]. *Education Week*, pp. C1-C24.

Tyack, D.B. (1974). *The One Best System.* Cambridge, MA: Harvard University Press.

United States House of Representatives. (1989, April 28). *Applied Technology Education Amendments of 1989* (Report 101-41).

Venezky, R.L., Kaestle, C.F., & Sum, A.M. (1987, January). *The Subtle Danger. Reflections on the Literacy Abilities of America's Young Adults* (Report No. 16-CAEP-01). Princeton, NJ: Center for Assessment of Educational Progress, Educational Testing Service.

Victor, K. (1989, March 25). "Help Wanted, Badly." *National Journal*, pp. 730-734.

Welch, W.W. (1979). "Twenty Years of Science Curriculum Development: A Look Back." *Review of Research in Education*, 282-306.

William T. Grant Foundation Commission on Work, Family and Citizenship (1988, November). *The Forgotten Half: Pathways to Success for America's Youth and Young Families.* Washington, DC: Author.

Wise, A.E., Darling-Hammond, L., Berry, B., Klein, S.P. (1987). *Licensing Teachers: Design for a Teaching Profession.* Santa Monica, CA: The RAND Corporation.

Wise, A.E., Darling-Hammond, L., McLaughlin, M.W., & Bernstein, H.T. (1984). *Teacher Evaluation: A Study of Effective Practices.* Santa Monica, CA: The RAND Corporation.

Woo, E. (1989, June 20). "Rave Debut Sours for Arts School." *Los Angeles Times*, p. 1, 23.

_____. (1989, April 23). "Tired of Having Little Say, Teachers Pushing for Shared Authority." *Los Angeles Times*, p. 3, 33.